

Pharmaco-Historical Resources in Madison, Wisconsin*

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I. An Introduction

FOR nearly fifty years Madison, Wisconsin, has served as the home of the American Institute of the History of Pharmacy. There are several reasons for this, including strong tradition, the support of Wisconsin pharmacists, and the congenial cooperation of the University of Wisconsin School of Pharmacy. Above all, however, are the pharmaco-historical resources located here, which are unrivalled in North America. The combination of these resources and the expertise found on the University of Wisconsin campus in the areas of the history of pharmacy and related disciplines makes Madison the ideal location for an Institute dedicated to the accurate documentation of pharmacy's contribution to civilization.

Yet, these resources are underused. In an effort to encourage scholars to visit our research center we are publishing a series of notes that describe the breadth and depth of the available resources. Our purpose is not to catalog these collections, which would be a massive undertaking, but rather we aim to characterize the collections in a way that will allow researchers to judge whether or not a trip to Madison would be valuable.

Pharmacopoeias as Witnesses

In 1946 the first Director of the Institute, George Urdang, wrote an article with the engaging title, "Pharmacopoeias as Witnesses of World History" (*Journal of the History of Medicine*, 1: 1946, 46-70). Urdang contended that such compendia of drug standards were indicative of "national sovereignty and unity" and served as witnesses to the growth of nations. As the governmentally sanctioned publications that guided the hands of pharmacists, pharmacopoeias are also witnesses to the development of the pharmaceutical profession and its practice. To do his research, Urdang used the marvelous collections of the University of Wisconsin, which had been built largely through the efforts of Edward Kremers, the second head of the University's pharmacy program. Because of their central importance to pharmaco-historical research, pharmacopoeias will serve as the focus to this introduction to resources in Madison.

For a researcher interested in pharmacopoeias, the first step would be to visit the main library on the University of Wisconsin-Madison campus, the Memorial Library. With a current collection of about four and one-half million volumes, and about two million microforms, it is one of the world's best research facilities. The union card catalog on the second floor contains the most comprehensive list of holdings for the University of Wisconsin Libraries <<http://www.library.wisc.edu>>, including Memorial Library and its special collections, the subject libraries, professional libraries, much of the State Historical Society Library's collection <<http://arcat.library.wisc.edu>>, and the Center for

Research Library's holdings (in Chicago). A visitor examining the title or the subject catalog under "pharmacopoeias" will be immediately impressed by the sheer volume of cards. Of the five full file drawers in the subject catalog dedicated to pharmaceutical titles, one is almost completely filled with cards that correspond to titles of pharmacopoeial literature. Among these cards you will find that the works are housed in various locations, including the Department of Rare Books and Special Collections, the Cutter collection, Memorial Library stacks, and Pharmacy Library. Those familiar with this literature will be interested to find cards for the 1550 edition of Ricettario Fiorentino, the 1574 edition of the Pharmacopoeia Augustana, and a 1568 edition of the Dispensatorium of Valerius Cordus, three of the oldest and most influential compendia. All are housed in the Rare Books Department.

Located on the fourth floor of Memorial Library[moved to the ninth floor], the Rare Books collection presents the researcher with a remarkable range of material. Although these books do not circulate, each item can be requested from the staff and studied in the, nearby reading room that overlooks Lake Mendota. The acquisition of a number of important collections in the history of science (the Thordarson, Duveen, and Cole Collections) point to the Library's strong commitment to the history of pharmacy, chemistry and alchemy, as well as the history of science in general. The Curator of the Rare Book Collection, in collaboration with faculty at the University, continues to add to this solid collection. Much of the material available of interest to historians of pharmacy appears in a bibliography edited by John Neu, the University's History of Science bibliographer, entitled *Chemical, Medical and Pharmaceutical Books Printed before 1800 in the Collections of the University of Wisconsin Libraries* (University of Wisconsin Press: Madison, 1965). The many works acquired since 1965 are listed in the Memorial Library union catalog and also in the Rare Book Room catalog.

The extent of a library's collection usually reflects the character and historical development of the university itself and the University of Wisconsin certainly follows this pattern. The efforts to build a unique collection in the History of Science are clearly evident in the number of individual titles and multiple editions of pre-1800 pharmacopoeias in the Rare Book Department. In addition, anyone scanning the cards in the main catalog will note that there are many nineteenth-century pharmacopoeias, from all over the world, that have a "Cutter" number on them, rather than a Library of Congress Classification number as used throughout the library system. The Wisconsin-Cutter classification system was used by the university libraries until the mid-1950s when the new Memorial Library was built; afterwards new acquisitions were catalogued using the Library of Congress scheme. Now relegated to pull-out drawers in the basement of the library, the Cutter collection includes nineteenth-century textbooks; handbooks; volumes of local, state, and national regulations; trade publications; dictionaries; and other pharmaceutical publications. Some of the rarer pharmacopoeias have been moved up to the Rare Book Room, but some unique or unusual editions of pharmacopoeias no doubt still reside in these drawers. Cutter books circulate on the same basis as books from the stacks.

Lest the researcher think that rare books and Cutter books comprise the bulk of the collection of pharmacopoeias, it must be pointed out that in the regular stacks of Memorial Library, pharmacopoeial literature fills approximately fifty linear feet of shelf space, with about thirty feet (or 180 volumes) of shelving devoted to pharmacopoeias in the Pharmacy Library. Pharmacopoeias are also included in the holdings of the Middleton Health Sciences Library (stacks and Rare Books), as well as the reference collections of the American Institute of the History of Pharmacy and the School of Pharmacy's history program. All in all the various libraries and collections contain about 500 pharmacopoeias, ranging from Amsterdam and Argentina to Yugoslavia and Zimbabwe. The value of the broad scope of the pharmacopoeial collection is heightened by its depth. Multiple editions of compendia from Augsburg, Edinburgh, London, Paris, Leiden, and Wurtemberg, for instance, allow a scholar to track the acceptance of new drugs both geographically and chronologically.

The significance of the resources in Madison is more apparent when compared to other institutions. The New York Public Library, a renowned general research library, has fewer than a hundred pharmacopoeias and closely associated works from before 1900. The Library of Health Sciences at the University of Illinois Medical Center in Chicago holds about 200 historical (pre-1900) pharmacopoeias in its excellent collection. The National Library of Medicine in Bethesda, the nation's best single repository of historical materials dealing with medical disciplines, has about 350 historical pharmacopoeias. Of the approximately 500 pharmacopoeias held in Madison-area collections, about three quarters or 375 were published before 1900.

For someone investigating the history of pharmacopoeias, there is more to examine than just the works themselves. Venturing over to Rennebohm Hall, the home of the School of Pharmacy, is worthwhile for anyone interested in pharmacopoeias. Besides the many volumes in the library and the above collections, the Kremers Reference Files (KRF) contain a large number of reprints, tearsheets, illustrations, and some manuscript material dealing with the development of drug standards. Originally collected for the purposes of writing a history of pharmacy (the resulting Kremers and Urdang's History), the Kremers Files were re-organized during the 1950s and 1960s. Maintained and added to since, the KRF now takes up over 300 file cabinet drawers organized according to a topical scheme. While strongest in the area of American pharmacy after 1880, the KRF holds valuable historical material, primary and secondary, on almost all aspects of pharmacy. A future installment of this series will be devoted largely to this unique resource.

If a pharmacopoeial investigator is concentrating on American standard setting, he will then have to visit the AIHP Collection housed at the State Historical Society of Wisconsin. Just across a mall from the Memorial Library, the Historical Society building is a complete facility for the investigation of American history. It is a repository of government publications and has extensive microform holdings of newspapers, catalogs, census records, and other documents. The Archives is one of the nation's best and is home for America's finest collection of pharmaceutical manuscripts. Among its several unique collections are the Records of the United States Pharmacopoeia; 154 archive boxes hold reports, memoranda, circular letters, and correspondence that went in and out

of the USP offices from 1860 to 1969. Moreover, the AIHP Collection includes the papers of some participants in pharmacopoeial revision, such as Francis E. Stewart and Robert P. Fischelis.

And if that were not enough, the excellent periodical collections housed at the Memorial, Pharmacy, and Medical Libraries cannot be ignored, since standardization issues abound in the pharmaceutical and medical journals. The University archives, located in Memorial Library and in the basement of the Steenbock Agricultural and Life Sciences Library, contains the records of several individuals involved in standardization. And, of course, there are the hundreds of volumes of associated literature such as dispensatories, commentaries, and epitomes, which grace various shelves across the Madison campus.

Lastly, an individual researching pharmacopoeias could consult with one or more of the trained historians who staff the History of Science Department, the History of Medicine Department, the School of Pharmacy, or the Institute. In conjunction with the University's librarians, these scholars form a necessary link between the available resources and prospective investigators.

Conclusion

Using pharmacopoeias as a focus, this note provides a short overview of the unique resources available in Madison for historians of pharmacy. In almost all areas of pharmaceutical literature, the Madison campus has unsurpassed historical collections. When combined with the collections of the University of Wisconsin's School of Pharmacy and the American Institute of the History of Pharmacy, the breadth and depth of these special resources truly makes Madison America's research center for the history of pharmacy.

II. PERIODICAL LITERATURE

BOOKS and journals share several outward similarities: both are typeset, printed, bound, and distributed. Their content may appear to be very much alike. Yet for the historian, they are quite different. As Sonnedecker points out, "Books represent the static aspect and journals the dynamic aspect of pharmaceutical literature."¹ Modern books, like the pharmacopoeias discussed in part one of this series, provide historians with a picture of the changing views of authorities on professional and scientific subjects. As the rate of change accelerated, however, more immediate means of communication were needed. The rise of periodic literature in pharmacy in the late eighteenth century stimulated the exchange of information in a way unrivalled since, even when compared with today's advanced technology. Serials, i.e., publications in any medium issued in successive parts bearing numerical or chronological designations and intended to be continued indefinitely, are still the main form of communication among pharmaceutical scientists, instructors, and practitioners. And while they do not perfectly mirror professional and scientific developments, journals provide important primary material for the historical analysis of almost any modern pharmaceutical issue.

The great explosion in the number of pharmaceutical journals during the nineteenth century is a mixed blessing for historians: a mountain of data exists, but the journals are often rare. Even when a library boasts that it contains a certain journal, the shelves often reveal a broken set with the desired volume missing. Sometimes the serials are on the shelves but not the indices. A researcher in Madison, however, usually finds the wanted volume. For example, George Urdang was impressed when he located the rare first number of *the Almanach oder Taschenbuch fuer Scheidekunstler und Apotheker* (1780) in the University of Wisconsin library. During the mid-1930s he had been unable to find it in any library in Berlin. In Urdang's judgment, the journal collection in Madison was "one of the most complete to be found anywhere."

This fine collection had its beginnings nearly sixty years before Urdang's assessment, when Frederick B. Power came to the Madison campus in 1883 to establish a pharmacy program. He arrived with the aim of founding not only a professional school, but a scientifically-based department as well. His students were going to do research, and therefore required access to current pharmaceutical literature. So began the University's acquisition of pharmaceutical periodicals. His successor, the pharmaceutical chemist and self-taught historian Edward Kremers, shared this approach to education and possessed a strong interest in pharmacy's past. Out of his diligence grew today's marvelous collection of historical pharmacy periodicals.

The Madison holdings include almost two hundred pharmaceutical periodicals established before 1900. Some of these are highly significant, like the *American Journal of Pharmacy*, the first English-language pharmaceutical journal (f. 1825); others are long defunct (the *Spatula*), or very short-lived (the *Tennessee Pharmacal Gazette* (1874-1875)), or rare and valuable (Trommsdorff's *Journal der Pharmacie fuer Aerzte und Apotheker*). By searching through their pages we can see the development of new scientific theories, laboratory methods, and professional ideals. Controversy and opinion flow from the pages of these journals. They breathe life into apparently mundane discussions and debates.

Most of the pre-1900 pharmacy periodicals are housed in the south section of Memorial Library, interspersed among over 100,000 other serial titles. The F. B. Power Library at the School of Pharmacy has a more modest collection of older journals, yet still one of the best in the country. In addition, other campus locations, such as the chemistry and medical libraries contain journals that have roots in pharmacy. Lastly, the Historical Library near Memorial Library is a fully functioning research facility holding runs of all major history journals as well as an extensive collection of newspapers and other periodicals.

The Madison serials collections also contain runs of journals specifically published for historians of pharmacy, such as the French *Revue d'Histoire de la Pharmacie* (and its predecessor, the *Bulletin*), the *Pharmaceutical Historian*, and the *Cercle Benelux d'Histoire de la Pharmacie*, as well as series such as the *Veroeffentlichungen* of the International Society for the History of Pharmacy. Less well known, but highly relevant,

is a complete set of the thirty-one issues of *The Badger Pharmacist* (1930-1941). This occasional publication began as a historical introduction to Madison for Wisconsin pharmacists coming here for the fiftieth annual meeting of the state pharmaceutical association. The brainchild of Kremers, *The Badger Pharmacist* broadened its scope to become "the first . . . periodical within the United States devoted exclusively to the History of Pharmacy."²

For all their value, however, old periodicals are not easy sources to mine. They often were partially indexed, if indexed at all. For this reason a periodicals collection is most valuable when associated with a strong collection of books and reference materials. By first tracing a trend through a set of standard works, a historian can pinpoint the time frame in which a development occurred. Then a search through the periodical literature, sometimes page by page, will produce the sought after discovery or event. Here in Madison the excellent pharmaco-historical resources, such as the topically arranged Kremers Reference Files, aid this sort of search.

Scholars from around the world have used the collection of pharmacy journals here in Madison to further their research efforts. The depth of the collection has also allowed some to pursue projects dealing specifically with pharmaceutical serials. For example, Minnie Meyer, a graduate student under the direction of Edward Kremers in the 1930s, wrote her bachelor's and master's theses on American pharmaceutical journals.³ The fourth edition of *Kremers and Urdang's History of Pharmacy* (a work based in part on the serials here) contains an appendix on pharmaceutical literature written by Glenn Sonnedecker. This bibliographic hidden treasure contains valuable information about the development of pharmaceutical literature drawn from the Madison collections, and sketches the major American and European trends.

The University's early commitment to historical studies of pharmacy is solidified by its continuing acquisition of international pharmaceutical journals. For example, the collections hold complete runs of the *Archiv der Pharmazie* (1822-), the *Pharmaceutical Journal* (1841-), the *Chemist and Druggist* (1859-), and the *Bolletino Chimico Farmaceutico* (1862-). All told, the collection of approximately two hundred pharmacy and pharmacy-related periodical titles in Madison is probably only surpassed by the magnificent holdings of the National Library of Medicine in Bethesda, Maryland. Incorporating the old Surgeon General's Library, the NLM contains over 700 pharmaceutical periodicals.

American Journals

One would not be surprised to find a strong holding of American pharmaceutical journals on the Madison campus. But as Frederick Hoffmann observed in 1900, the "development of the periodical press in North American . . . was . . . comparatively tardy."⁴ The main reason for this, of course, was the relatively late professional and commercial development of pharmacy in the United States. Although the *Journal of the Philadelphia College of Pharmacy*, later called the *American Journal of Pharmacy*, appeared in 1825, and the popular *Druggists' Circular* began publishing in 1857, the real explosion in

pharmaceutical journalism in America did not occur until the 1870s. By then diversity of interest among pharmacists was no longer fully satisfied by the academic *Journal of Pharmacy* and the conservatively commercial *Druggists' Circular*. For the period between 1858 and 1900, Hoffmann lists seventy-two American pharmaceutical periodicals, including publications from state associations and trade journals. At least fifty of these are found on the UW library shelves.

The wide variety of American pharmaceutical journalism is obvious when one runs through the subject catalog of the University of Wisconsin Libraries under the rubric "Pharmacy—Periodicals." On closer look, one notices what Sonnedecker calls an "incessant sequence of mergers and . . . changes in title [and] purpose." For example, the popular trade publication, *The American Druggist*, began in 1871 as *New Remedies, A Quarterly Retrospect of Therapeutics, Pharmacy and Allied Subjects* under physician-editor Horatio C. Wood. Another doctor, Frederick Castle, took over in 1873. When pharmacist Charles Rice became associate editor in 1876, the subtitle changed to *A Monthly Trade Journal of Materia Medica, Pharmacy and Therapeutics*. In 1884 the transformation from medical to pharmaceutical periodical was completed with the title change to *American Druggist, An Illustrated Monthly Journal of Pharmacy, Chemistry, and Materia Medica*. When Rice died in 1891, pharmacist Caswell A. Mayo became editor and changed the title to *American Druggist, a Journal of Practical Pharmacy*, indicating a shift in direction away from that of his scholarly predecessor. In 1893 the journal merged with the *Pharmaceutical Record*. Its title remained the *American Druggist and Pharmaceutical Record* until 1923 when "*and Pharmaceutical Record*" was dropped. In 1927 a new subtitle was added *The Pharmaceutical Business Paper*. In 1931 "*Magazine*" replaced "*Paper*," with the subtitle disappearing altogether in 1933. The journal's basic magazine format remained through several editors until 1952 when *American Druggist* became more of a professional news periodical. Its title again changed in 1973 to *American Druggist Merchandising*.

While information such as the above can be gleaned from the journals themselves, one needs more for a full historical treatment of the trends behind the publications. Historians investigating pharmaceutical journalism itself will benefit not only from the extensive holding of serials here, but also from the papers of former editors preserved in the AIHP Collections at the State Historical Society of Wisconsin and in the Kremers Reference Files. Kremers, himself an editor of the *Pharmaceutical Archives*, *Badger Pharmacist*, and (with Hoffmann) of the *Pharmaceutical Review*, corresponded at length with Hoffmann and other figures in pharmaceutical journalism. Other figures of note include Rufus Lyman, founding editor of the *American Journal of Pharmaceutical Education* and Donald E. Francke, founder of *Drug Intelligence and Clinical Pharmacy*. The Kremers Reference Files also contains a section dedicated to pharmaceutical journalism with sample copies or tearsheets from a wide variety of periodicals all in one place for easy comparison.

European Journals

Just as in America, journals in Europe reflect the changing concerns of the profession of pharmacy. For example, Liebig's *Annalen der Chemie*, one of the most influential scientific journals of the nineteenth century, had its roots in pharmacy in the eighteenth century. As the needs of pharmacists and chemists changed, so too did their publications. Table 1 shows in schematic form the various periodicals that evolved, merged, and separated to produce the *Annalen*. The titles alone of these periodicals serve as guideposts to the evolution of the profession. Of the periodicals involved—*Journal der Pharmacie*, *Neues Journal der Pharmacie*, *Archiv der Pharmacie*, *Magazin fuer Pharmacie* and *Annalen der Pharmacie*—only the *Magazin* is not available on the Madison campus.

Conclusion

As European pharmacists of the eighteenth century became active participants in the new science of their era, periodic literature appeared to meet the growing demand for current information. Since the publication of the *Almanach oder Taschenbuch fuer Scheidekunstler und Apotheker* in 1780, pharmacy journals have served as conduits for professional, commercial, academic, and scientific communications. For historians of modern pharmacy there is no more important single class of primary material than these serials, and Madison's fine collection of such periodicals enhances its position as America's research center for the history of pharmacy.

Notes

1. Glenn Sonnedecker, rev. *Kremers and Urdang's History of Pharmacy* 4th ed., (Philadelphia: Lippencott 1976), 287.
2. George Urdang, "Why the American Institute of the History of Pharmacy was Organized at Madison, Wisconsin," *The Badger Pharmacist* (1941) #31: 4.
3. Minnie Meyer, "The Pharmaceutical Journals of the United States," *Journal of the American Pharmaceutical Association* (1933) 22:424-430. This useful article lists titles to American journals by states.
4. Frederick Hoffmann, "A Century of American Pharmaceutical Literature and Journalism," *American Druggist and Pharmaceutical Record* (1901) 36:159.
5. Sonnedecker (n. 1), 436-437.

III. KREMERS REFERENCE FILES

TO say that the Kremers Reference Files (KRF) is a unique pharmaco-historical resource is an understatement. This unimposing facility has attracted scholars from around the world to examine its varied holdings. The diversity of its contents is attributable to Edward Kremers, the second Director of the University of Wisconsin's pharmacy program and a man of many interests. Kremers, with the help of many of his students during his long tenure as head of the pharmacy program, amassed the nucleus of the

collection. After his arrival in Madison in 1939, George Urdang worked with Kremers and his special resources to produce their renowned *History of Pharmacy*. Kremers, of course, did not foresee the modern KRF, presently housed on the first floor of the new School of Pharmacy building, Rennebohm Hall, directly across the hall from the AIHP offices.

Unique and eclectic are two words that immediately come to mind for describing the collection, which is not really an archive, nor a manuscript collection, library, or museum. Yet, it holds company records, personal correspondence, wholesale and school catalogs, and a modest collection of artifacts. The collection as a whole is uncatalogued, so that the only way to really know what is available in detail is to investigate the contents in person.

Core Collection

As you enter the KRF, the most imposing aspect is the sight of 100-odd file cabinets, six drawers high reaching toward the ceiling. This is the core collection arranged according to a classification scheme modeled after the ISIS bibliography system of the History of Science Society. In the 1950s Glenn Sonnedecker and Ernst Stieb adapted the ISIS system to the particulars of history of pharmacy materials and started the task of reorganizing the mountain of letters, tearsheets, pamphlets, and photographs, as well as reference materials, amassed by Kremers and later historians. The scheme includes categories for aspects of retail pharmacy, pharmacy education and literature, instruments, materia medica, social relations, as well as philosophy and methodology. Although the focus of the KRF has always been pharmaceutical, material from related sciences and professions is also included. As pharmacy itself changed and adapted so has the classification scheme, with periodic revisions. To accommodate an increasing number of pharmaceutical images, a separate section was added for pictorial examples of items under the main subject headings. (See Table 1.)

Table 1. KREMERS REFERENCE FILES MAIN CATEGORIES

A. General References and tools

1. Bibliographic
2. Biography
3. Encyclopedias and Dictionaries
4. General Works
5. Historiography

B. Pre-1600

10. Pre-Classical Cultures (other than Far Eastern and Pre-Columbian)
11. Far East Pre-Classical to A. D. 1600
12. Classical Antiquity to about A. D. 500 (other than Far Eastern and Pre-Columbian)
13. Islam and Near East, A. D. 500-1600
14. Europe and Byzantium, A. D. 500-1600
15. Pre-Columbian Americas

16. Primitive, Supernatural, Religious, and Folk Medicine

C. Topical—1600 onwards

18. Marketing
19. Merchandising Methods; Advertising; Promotional
20. Mergers; Combines; Cartels
21. Personnel Matters
22. Financial
23. Design
24. Location
25. Types of Distribution
26. Ownership Restrictions
27. Volume by Departments in Pharmacies
28. Sidelines of Pharmacies
29. Socialization of Pharmaceutical Services
31. Education
32. History of Literature
33. Hospitals and Pharmacy
34. Humanistic Relations
36. Institutional Histories 37. Instruments, Equipment and Tecnic
38. Manufacturing
39. Material Medica, Pharmacology (Including Toxicology) and Therapeutics
41. Perfumes, Cosmetics, Toiletries
42. Primitive, Religious, Supernatural, and Folk Medicine
43. Research, Discovery, and Invention
44. Retail Pharmacy
45. Sickroom Supplies, Medical Devices, Dressings
46. Social Relations
47. Wholesale Drug Field
48. Philosophy and Methodology

D. Related Material not in "A", "B", or "C"

60. Biologic Sciences
61. Business and Economics
62. Earth Sciences
63. Health Fields
64. History
65. Humanities
66. Physical Sciences
67. Social Studies and Conditions
68. Technology

P1 through P68 contain pictorial materials of the foregoing topics.

Much of the material in the file cabinets would be considered ephemeral. That is, it is not generally available in a form that was designed to be shelved or stored for repeated

reference. In this category you will find important personal correspondence between Kremers and the leaders of the field of pharmacy in the United States and Europe. This is sometimes enlivened by picture postcards sent to remind authors of upcoming deadlines, and programs from professional society meetings. Many of the files contain typescripts of speeches presented before academic or professional groups—the kind of document that is easily discarded by its author, yet which proves invaluable to future historians trying to understand the personal and profession details of the past. Other kinds of documents include advertisements and scientific articles on particular drugs, as well as tearsheets from contemporary literature concerning patent infractions, and other concerns about the manufacture and use of drugs. A random check of the contents of a file drawer reveals, for example, a list compiled by Kremers of pharmacies in Pierce County, Wisconsin, accompanied by a personal "history of my home town drug store in Plum City," prepared by a pharmacist in 1928. Another drawer begins with a folder labeled "Apothecaries' Bicycle Club," or reveals a string-bound packet of "material concerning plasters, 1890-1940."

Indeed, one of the great dangers of the researcher working in these files is having your attention diverted from the specific task at hand by some item that catches your eye, and finding yourself poring over a document that you never expected to find. At the same time, you cannot help but wonder whether the history of our own era will ever be written with enough accuracy unless we too preserve some of the seemingly ephemeral material that fills in the blanks left by hard-cover public documents. As part of the Institute's mission to document pharmacy's role in civilization, the AIHP's historical staff aids in the mainenance of the core files

Dictionary files

Kremers not only preserved documents, he also made great strides in organizing the scientific and technical information available to him at the time. One of the remarkable fruits of this prolific organizer is a set of card files used to keep track of pharmaceutical "facts." There are files (arranged alphabetically) that list black and white illustrations of medicinal plants from a number of contemporary texts (c. 1857-1923), colored illustrations of plants (1810-1922), medicinal plant gardens associated with schools of pharmacy (1910-1930), and a file of botanical names for plants with each Chinese name in characters and transliterated.

In this same bank of card files you can see the human side of pharmacy reflected as well as the scientific side. Kremers compiled a file of distorted drug names on orders received in American pharmacies from about 1896 to 1938. A project of this type required the help of more than one individual, and this compilation was prepared largely by students in the School of Pharmacy. It is difficult not to feel compassion for the pharmacist who had to decipher many of these orders, and realize that "Andy Cameron" was antikamnia, "Boston Pedro" was Balsam Copaiba, "Lice Oil" was a distortion of Lysol, "Life of Potem" equaled Lycopodium, or that "Purgatory of Maustache" was permanganate of potash. In addition to these files, there are files for medicinal organic compounds in

German and English, pharmaco-chemical lab apparatus, and cards listing various chemical tests and reactions.

Encyclopedia of Pharmacy

In a corner of the KRF, 144 shelf boxes contain another unique pharmaco-historical resource. For want of a better title, it is called the Kremers historico-bibliographic encyclopedia of pharmacy. This dictionary file is comprised of approximately 129,000 entries, gathered between 1892 and 1935 while Kremers was head of Wisconsin's pharmacy department. Here are topical references gleaned from a variety of publications he read regularly and marked for clipping or copying. This collection was seen at first by Kremers as a reference tool similar to the card files mentioned above, but gradually it took on the character of an encyclopedia. Because the coverage of topics is unpredictable and citations are often in cryptic abbreviations, the encyclopedia has limited utility. Yet, it serves well as a reference of last resort. When a researcher can find nothing about a certain drug or product or process from the period 1890 to 1935 there is a chance that some reference to it found its way into this unpublished encyclopedia.

Drug Topics Collection

In 1974, the AIHP received from Medical Economics Corporation the old photograph collection or "morgue" of *Drug Topics* magazine. Composed of nearly 17,000 photographs, the Drug Topics Collection documents pictorially American drugstore life in the middle third of the twentieth century. The collection does contain a few earlier photographs, but is strongest from the years 1945 to 1970. Here someone researching the history of American cosmetics, for example, could find scores of photographs showing products on display from the 1940s, 50s, and 60s. In addition to the photographs one would expect to find are pictures of parade floats, prom queens, and celebrities who all had some connection with particular drugstores. Arranged alphabetically according to a rather idiosyncratic filing system, the collection is a largely untapped resource. Unfortunately, many of the photographs are heavily retouched or undocumented, facts that reduce their utility for the purposes of illustration or research. But still the Drug Topics Collection can fulfill a real need among historians of pharmacy for images of modern American pharmacies.

Catalogue Collection

Lining the tops of cabinets and wall shelves in the Kremers Reference Files are catalogs. They fall into three broad categories. On shelves on the north wall are found an estimated 1000 catalogs from 103 different American schools and colleges of pharmacy from around the nation, covering a time span from around 1885 to 1985. Although some of the runs are incomplete, this catalog collection provides one of the best records of American pharmaceutical education to be found anywhere in the United States. Like today, college catalogs were a mixture of information and public relations. Since a college diploma was not required for licensure in all states until well into the present century, the older catalogs had a more difficult task ahead when recruiting students. To draw in potential

graduates, schools published detailed descriptions of their facilities (often with crude or murky illustrations), faculty, campus life, as well as lists of students and graduates. The value of these catalogs is enhanced by the wealth of material held in the educational section of the core files (about 56 file drawers for American institutions) located only a few steps away.

On shelves along the Northwest wall sit catalogs from wholesalers and equipment dealers. The wholesale catalog collection is one of the most extensive in the country, dating from 1760 to the middle of the twentieth century. The strength of the collection is from about 1885 to 1930, with major wholesale catalogs from almost every year. A search through these catalogs provides answers to some of the most common questions in the history of pharmacy: what was available when and how much did it cost. While these wholesale catalogs cannot resolve the question of what an individual drugstore carried as merchandise, they can provide information on what they could have stocked. Not only do the catalogs provide obvious price and availability information, but a comparison of the patent medicine advertisements they contain shows the different promotional methods used by companies producing proprietary products, especially patent medicines. Ads in wholesale catalogs sent to pharmacists were quite different from the mass marketing promotions appearing in newspapers and magazines. Lastly, the reference files on drug manufacturers, which contain annual reports and price lists, greatly supplements the value of this catalog collection.

Of less interest to historians of the pharmaceutical profession, the KRF's holdings of equipment and chemical catalogs spanning the years 1885 to 1983 document the growth of the core sciences that underlie practice. Some of the most impressive illustrations of laboratory equipment from the early years of this century are to be found in these catalogs.

Artifacts

Over the years the Institute and the School of Pharmacy have accumulated a small collection of pharmaceutical artifacts, which contains few rarities. Upon opening the three artifact cabinets one is immediately struck with the "drugstore aroma" of old. The packaged and prepared drugs inside, as well as boxes from F. B. Powers' personal herbarium, combine to produce the fragrance of an earlier time. Here is found an assemblage of common pharmacy equipment such as pill machines, percolators, and sets of weights. Among the more unusual items are a large jar of millipedes from 1901, a box labeled "Chemicals and apparatus from lab of K. P. Link (including warfarin samples)" and two small reagent bottles used by William Procter, Jr. Using these bottles as a springboard, George Urdang wrote one of the best short pieces of his career. (*Pharmaceutical Archives* 14: 1943, 43-48.)

Pharmacy Records and Prescriptions

Most of the pharmacy record books and prescription collections in Madison are located at the State Historical Society of Wisconsin building nearby on campus, either as part of the

Society's own holdings or as part of the AIHP Collection. (These materials will be described in the next installment of this series.) The Kremers Reference Files, however, do contain a small collection of day books and prescriptions from shops in Wisconsin. Just as is the case with the KRF's modest artifacts collection, these records have been used primarily for educational and exhibit purposes within the School of Pharmacy.

Conclusion

The Kremers Reference Files is a collection so large and diverse that it almost defies description. Far from being a static archival collection, the KRF continues to grow. The historical staff of the American Institute of the History of Pharmacy adds material almost daily, insuring that today's pharmacy will be accessible to future historians. In its new home in Rennebohm Hall, this valuable resource has room to expand and to serve the needs of historians well into the next century. When combined with the other collections nearby, the KRF lends additional credence to Madison's claim as America's center for pharmaco-historical research.

IV. MANUSCRIPT COLLECTIONS

IN 1986, historian Glenn Sonnedecker tackled the difficult question of determining the origins of the *American Journal of Pharmaceutical Education*. Did it simply evolve out of other Association efforts, or was it the brainchild of its first editor? For Sonnedecker, that "question, like many others in the history of pharmaceutical education, can be illuminated by searching the mass of personal papers cumulated by Rufus A. Lyman ... preserved as part of the Manuscript Collection of the American Institute of the History of Pharmacy, at the State Historical Society of Wisconsin." (*American Journal of Pharmaceutical Education*, 50:1986, 491.) Relying primarily on the materials in the Lyman papers, Sonnedecker demonstrates the crucial role played by Lyman in founding the journal, and he also shows how useful manuscripts collections can be to the modern historian.

The book, periodical, and reference collections related to the history of pharmacy at the University of Wisconsin-Madison are recognized internationally for their depth and scope. Both the American Institute of the History of Pharmacy and its field have benefited greatly from the University's careful maintenance of these collections. And while the Institute has also aided the growth of these resources, its greatest contribution lies in a different area: the collection, processing, and preservation of unpublished documents related to American pharmacy. In less than two decades modest holdings of private papers and institutional records have developed into America's single most important depository of pharmaceutical manuscripts.

Most of the pharmaco-historical materials described in the first three installments of this series—books, periodicals, and references—are not unique to Madison, except in their concentration. In what follows, however, we will turn to materials that are unique: the unpublished documents of individuals and institutions connected with American pharmacy's past. Collectively, these are known as manuscripts (although most modern

examples are really typescripts). Carefully preserved in acid-free folders and boxes within climate controlled rooms, letters written by Joseph Remington, E. Fullerton Cook, Rufus Lyman, Robert P. Fischelis, George Urdang, Donald E. Francke, William Apple, and scores of other important (and not-so-important) figures await the scrutiny of historians. Records of the American Association of Colleges of Pharmacy, the American College of Apothecaries, the United States Pharmacopeial Convention, the National Association of Boards of Pharmacy, and Rho Chi are also available to scholars.

In 1970 the pages of *Pharmacy in History* proudly announced that the "AIHP Expands Archival Program." Through the efforts of Director Glenn Sonnedecker an agreement had been reached designating "the State Historical Society of Wisconsin as repository for AIHP collections of unpublished records." (*Pharmacy in History*, 12:1970, 170.) Materials accumulated by the Institute over the decades were sent to the State Historical Society for the professional care and preservation unavailable through the Institute's limited financial resources. Sonnedecker expressed the hope that "eventually this will become a great and unique treasurehouse of pharmaceutical Americana." That hope was realized in short order.

The card catalog at the State Historical Society of Wisconsin now lists seventeen collections related to pharmacy, including ten that are part of the American Institute of the History of Pharmacy Collection. Although this note will concentrate on the holdings at the State Historical Society, researchers are reminded that papers of University of Wisconsin scientists such as Harry Steenbock, Karl Paul Link, Arthur Tatum, Conrad Elvehjem, Arthur Loevenhart, and Takeru Higuchi are available in the Steenbock Facility of the University of Wisconsin Archives and the papers of the Directors and Deans of the School of Pharmacy are located at the main office of the University Archives in Memorial Library.

AIHP Manuscripts Collection

Long-time readers of *Pharmacy in History* are no strangers to the AIHP Manuscripts Collection. After the announcement of the formation of the collection, Glenn Sonnedecker began a series of notes describing those collections as they became fully processed and available to researchers. A brief review of that series reveals the excitement and satisfaction associated with the preservation of the heritage of American pharmacy. (Dr. Sonnedecker has agreed to revive this series in the near future.—Ed.)

The first collections transferred to the Historical Society for processing were relatively small in size, although not in significance. As noted by Sonnedecker in the first installment of his series, the records of the Rho Chi Honor Society "constituted one of the initial deposits in the embryonic AIHP Collection." (*Pharmacy in History*, 16:1974, 108.) The twenty boxes totaling about twelve linear feet (Mss. 229) hold records from the period 1908 to 1971 and document the rise of American pharmacy's honor society, which was founded in 1922.

The papers of Rufus A. Lyman (1875-1957), a leading figure in American pharmaceutical education during the first half of the twentieth century and founding editor of the *American Journal of Pharmaceutical Education*, were the second to be described by Sonnedecker in his series (*Pharmacy in History*, 19, 1977: 89-91). Divided into two main sections—correspondence and a subject file—the collection of papers (Mss. 266) takes up forty-seven archival boxes containing letters, articles, speeches, and other documents related to pharmacy and its educational system. Sonnedecker utilized this collection of papers in writing his history of the founding of the journal of the American Association of Colleges of Pharmacy (*American Journal of Pharmaceutical Education*, 50: 1986, 491-495).

The third collection given attention in Sonnedecker's series was a set of records from the American Association of College of Pharmacy (Mss. 298). The lack of a systematic history of the AACP makes the preservation of the records of this organization all the more valuable. The scope of the collection is indicated by the division of the material from forty-five archival boxes into ten categories: Correspondence (1884, 1917, 1937-1968); Annual Meetings (agendas, minutes, programs, and delegate lists from 1871-1885, 1901-1971); Executive Committees (agendas and minutes, 1944-1968); Seminars (agendas, programs, and reports, 1949-1962); Financial Records (statements, receipts, and disbursements, 1903-1968); Surveys (questionnaires and data regarding enrollment, degrees conferred, and geographical distribution, 1938-1963); Legislation (mainly federal documents, 1943-1956); Affiliation (institutions affiliated with AACP, 1943-1968); and Miscellany (1906, 1943-1967). Although the collection spans many years, some large gaps exist in the chronology for each of these categories. (*Pharmacy in History*, 22: 1980, 113-114.)

Since the last installment of the Sonnedecker series of notes, several additional collections of pharmaceutical Americana have been inventoried, including the massive United States Pharmacopeial Convention Records, 1819-1980 (Mss. 149, 204 archival boxes), the Records of the American College of Apothecaries (Mss. 184, 14 boxes); the Francis Edward Stewart Papers, 1866-1938 (Mss. 606, 19 boxes); the Donald E. Francke Papers, 1946-1978 (Mss. 553, 22 boxes); the J. Leon and Frederick D. Lascoff Papers, 1935-1970 (Mss. 637, 3 boxes), the Records of the National Association of Boards of Pharmacy, 1907-1972 (Mss. 716, 6 boxes); and Collected Pharmacy Records [from miscellaneous businesses], 1855-1918 (Mss. 726, 18 boxes and 18 reels of microfilm).

The Records of the United States Pharmacopeial Convention is by far the largest individual collection of papers fully processed in the AIHP Collection. No historian working on drug standardization in the United States should ignore this vast set of letters, proposed monographs, financial records, circulars, and committee reports. Closely related are the papers of Francis Edward Stewart (1853-1941), a physician, pharmacist, and author who worked with his colleagues in both professions to improve the quality of medicines.

Two small collections of papers are related as well: those of J. Leon Lascoff (1867-1943) and his son Frederick D. Lascoff (1900-1970) and the American College of Apothecaries.

Among the pharmaceutical elite of New York City, the Lascoffs were key founders of the ACA, as well as being active in several other professional organizations. The three boxes of Lascoff materials pertain mainly to their public commitment to pharmacy in speech and in print, rather than the operation of their renowned establishment. In fact, more personal correspondence of Frederick Lascoff exists in the ACA Records, which document the history organization to 1963, than in the Lascoff papers themselves.

Organizational matters on an international level are the main subjects of the Donald E. Francke Papers of the AIHP Collection. Although best known as a leader in American pharmacy, Francke (1919-1978) was among a handful of pharmacists in the United States who played an active role in the international professional scene during the period 1946-1978. (Access to these papers is restricted; interested researchers should contact the Director of the Institute for details.)

Any historian interested in the practice of pharmacy during the last century would gain from an examination of the old business records and prescription books contained in Mss. 726 or the Records of the National Association of Boards of Pharmacy, 1907-1972 (Mss. 716). Much of the material in each of these collections is on microfilm and documents the sorts of medicines compounded by pharmacists (c. 1855 to 1918) and the types of questions posed to potential registered pharmacists by state boards (c. 1915 to 1950).

Also available to scholars are the impressive collections of papers not yet fully processed and inventoried as part of the AIHP Manuscripts Collection. These include documents from the American Pharmaceutical Association, the American Institute of the History of Pharmacy, the Wisconsin State Board of Pharmacy, the Columbia University School of Pharmacy, and additional records deposited by the American Association of Colleges of Pharmacy. The papers of Robert P. Fischelis (1890-1980), probably the largest single collection of personal papers of any American pharmacist available to scholars, will soon be fully processed. A prominent figure in pharmacy for a half century, Fischelis meticulously kept almost every report, letter, and record that crossed his desk. Totalling 214 cubic feet of material (roughly 500 archival boxes), this collection of papers is more than twice the size of the USP Collection, and covers some of the most controversial and exciting periods of American pharmacy. The chronological span alone ranks this collection among the top in the country, and Fischelis' own prominence adds prestige to the collection.

Other Collections

Lastly, historians of pharmacy should take note of the pharmacy-related manuscripts held in the Archives Division of the State Historical Society that are not part of the AIHP Manuscripts Collection, but available for research. These include eleven archives boxes of the Edward Kremers Papers, 1785-1941 (*WisMss NB*, Photo Lot 3784). Much of the material was collected by Kremers in order to write his autobiography and it covers his life prior to 1890. In addition to the bulk of personal and family papers, this collection also includes material describing his education and training in pharmacy. As the general repository for manuscripts gathered from throughout the state of Wisconsin, the

Historical Society holds a number of collections of company records, such as the business records of Green and Button, wholesale druggists of Milwaukee (e. 1848-1894), and the business records of Willson Monarch Laboratories of Edgerton, Wisconsin (1910- 1940). There are also recipe books, prescription books, and biographical information from a number of Wisconsin drug stores. Some of the collected papers of physicians in the State Historical Society also include material related to pharmacy.

Conclusion

In an effort to encourage scholars to visit our research center in the history of pharmacy, we have published this series of informational notes. Rather than catalog the collections in detail, a project that would take hundreds of pages, Madison's pharmaco-historical resources have been briefly characterized. Interested historians should feel free to contact the offices of the American Institute of the History of Pharmacy (777 Highland Ave., Madison, Wisconsin 53705) with specific questions about available materials. Scholars should also take note of a special fund established at the University of Wisconsin to provide support for visits to Madison to take advantage of these resources (Sonnedecker Residency Program).

The University of Wisconsin—Madison (also known as University of Wisconsin, Wisconsin, UW, regionally as UW—Madison, or simply Madison) is a public research university in Madison, Wisconsin. Founded when Wisconsin achieved statehood in 1848, UW—Madison is the official state university of Wisconsin, and the flagship campus of the University of Wisconsin System. It was the first public university established in Wisconsin and remains the oldest and largest public university in the state. It became a land 451 Junction Rd, Madison, WI 53717. UW Health is the academic medical center and health system for the University of Wisconsin and includes the renowned UW Hospital, American Family Children's Hospital, UW Carbone Comprehensive Cancer Center and UW Medical Foundation in Madison, Wisconsin. Pharmacy. UW Health Pharmacy. 7102 Mineral Point Rd, Madison, WI 53717. UW Health pharmacists provide expert knowledge in managing your drug therapy. Pharmacy. UW Health Union Corners Clinic.