SECTION ON HISTORICAL PHARMACY, AMERICAN PHARMACEUTICAL ASSOCIATION

HISTORICAL FRAGMENTS.*

BY EDWARD KREMERS.

15. THE APOTHECARY'S CONCESSION GRANTED IN 1796 TO IGNAZ BIECHELE BY
THE BISHOPRIC OF EICHSTAEDT.

Introduction.—In his biography, the apothecary Becker, later Senator and Assessor of the provincial medical college, relates how, early in the eighteenth century, he managed to secure a concession for the establishment of an apothecary shop in Potsdam. Frederick William I was anxious to enlarge the royal residence not far distant from Berlin and, therefore, took a personal interest even in the location of a second apothecary shop. With his father, also an apothecary, and a pharmaceutical equipment, Becker had escaped over the Hessian frontier. The establishment in Potsdam, however, was another matter. Now, the king was in the habit of taking an afternoon ride out of one of the gates and returning through another. So, young Becker stationed himself at the Brandenburg gate waiting for the king's return. The king returned as usual, but apparently did not notice Becker. The etiquette of those out-of-door audiences, however, demanded that the petitioner wait until addressed by the king. So Becker returned to his post the next afternoon, when the king addressed him. After a brief interview, the aspirant for a concession was directed to go to one of the cabinet councillors who, he was informed, would assign him a respectable location.

This gentleman, however, lived in the house of the first apothecary, whose wife appears to have exercised an undue influence over him. So Becker was assigned a small shop in an out-of-the-way, narrow street. Though dissatisfied, Becker was not discouraged, and established himself. Thereupon he again posted himself at the city gate awaiting the king. Frederick William came, was in good humor, and addressed Becker from his horse, asking him how he was getting along. Not very well, was Becker's reply. Inquiring for the reason, the king was told that the location might be good enough for a tailor or a cobbler, but not for an apothecary. The king, angry with his councillor, rode up to the latter's door and called him out, giving him a scolding for the miserable treatment he had accorded Becker. When told that no other house was available in the new portion of the city to which the second apothecary had been assigned, the king told Becker to find a place for himself in the old town. Thus it came about that the second anotherary was located on the market square, opposite the royal palace, in direct competition with the first apothecary, whose wife had conspired against him. Such were the good old times.

Although the practice of the professions as well as of the trades generally was given free in Germany not long after the French Revolution, the practice of pharmacy was not included in these changes, but the system of concession by the state was continued.

^{*}Read before Section on Historical Pharmacy, A. Ph. A., Atlantic City meeting, 1916. This caption was adopted by the writer in 1904 (*Pharm. Rev.*, 22, p. 427) as a collective term for short accounts of matters of interest to the history of pharmacy, the first of which had been published in 1896. In order that the reader may have some idea of the scope of the topics treated in these papers, also that interested persons may have ready access to them, the catalogued list of these papers has been placed at the end of this contribution.

The average American student of pharmacy finds the practice of his calling by concessions, whether personal or real, strange to his way of economic thinking. The personal element which entered into the granting of such a concession by the state, whatever the form of government, whether king or clerical potentate, seems even stranger.

Whereas the story of Becker can readily be translated and thus brought home to the American student, though he know but little more about the German language than he does about German history, the opportunity to illustrate the granting of a concession by a document may be enjoyed by but a few teachers of the history of pharmacy, especially on this side of the Atlantic.

The University of Wisconsin has been fortunate enough to secure such a document, issued by one of the numerous clerical states of the Holy Roman Empire shortly before its dissolution by Napoleon.

The document in question was issued in 1796 by officers of the Bishopric of Eichstaedt, the bishop being also one of the *Reichsfuersten*, indeed by the last one of a long line of bishops, namely Joseph I, Count of Stubenberg, who ruled over Eichstaedt from 1790 to 1802.

Of the 264 lay and the 65 clerical states that constituted the Holy Roman Empire between 1648 and 1803 many are no longer known even to the student of general history. Hence it may not be amiss to state that Eichstaedt owes its origin to St. Boniface. Having received a grant of land from Count Suitger, he in 745 ordained Willibald as bishop. Eichstaedt flourished because of the pilgrimages to the grave of St. Willibald, to which relics were added the bones of St. Walpurgis. Thus as early as 908 Eichstaedt enjoyed the rights of a city with the privileges of its own revenue, mint and market. In 1305 the bishopric inherited the extensive estates of the Counts of Hirschberg, thus becoming one of the largest foundations of the empire. In 1785, *i.e.*, shortly before the document, which is the immediate cause of this account, was issued, Eichstaedt comprised a territory of 1100 square km. with 57,000 inhabitants distributed over 8 municipalities, 14 market places and 200 villages. Its resources were 250,000 florins. It was secularized in 1802.

As to the practice of pharmacy in Eichstaedt, it appears to have taken the usual course to be expected in a monastery that later developed into a clerical state. Sax, in his Bischoefe und Reichsfuersten von Eichstaedt, informs us that the domkapitelsche Apotheke, i.e., the apothecary shop of the cathedral chapter, was located at the entrance to the mortuary in the east part of the cathedral (p. 279). The same historian of Eichstaedt informs us that as early as 1070 one of the canons, a Reginold medicus et presbyter, was manager of the Potionarium. At that time, so at least we are informed, prayers were dispensed as well as medicaments. These prayers had to be repeated by the patient during cupping or while in the bath, etc. Later, the canons took less interest in natural history and elected a Provisor, i.e., manager of the dispensary, from the laity. However, apothecary as well as physician were always appointed by the cathedral chapter. It is one of these appointments that the document under consideration records.

For a better understanding of the situation, however, it will be necessary to go back once more. The origin of the apothecary shop as a monastic dispensary has already been noted, also the transfer of the immediate management of the dispensary from a member of the brotherhood to a lay manager. While the use of the dispensary was not restricted to the brotherhood, apothecary as well as physician had to promise on oath not to leave the city so long as a member of the

cathedral chapter was sick. The next step toward secularization was taken in the seventeenth century, just when does not appear to have been recorded. This much, however, is known, that in 1621 Balthasar Richter was the last lay *Provisor*. In 1700 Franz Palm bought the apothecary shop for 5300 fl., from whom it is not stated. In 1759 Joseph Duscher sold it to Johann Neponuk Biechele, a citizen of Eichstaedt. It is to the son of this purchaser that the concession recorded in our document was granted by the chapter in 1796. A descendant of this family is in possession of the secularized apothecary shop to-day (Sax, p. 279 ¹), the sale of the cathedral pharmacy having been effected by Bavaria in 1807 (p. 762). Thus we see that the history of this place, which we can trace, though but roughly, through well nigh a thousand years, has been that of one type of the German apothecary shop, viz.: from the monastic dispensary to the public pharmacy in private possession.

By way of supplement to this imperfect picture, it may not be out of place to point out that in 1727, *i.e.*, some decades after the sale of the cathedral pharmacy, a competitor was established by the chapter in the form of a *Hofapotheke*, under the direction of the body physician, Georg Kupfer. At the time of the secularization, this was also sold by the state of Bavaria (p. 279¹), more particularly in 1808 (p. 763). This second apothecary shop is now also in possession of the Biechele family.

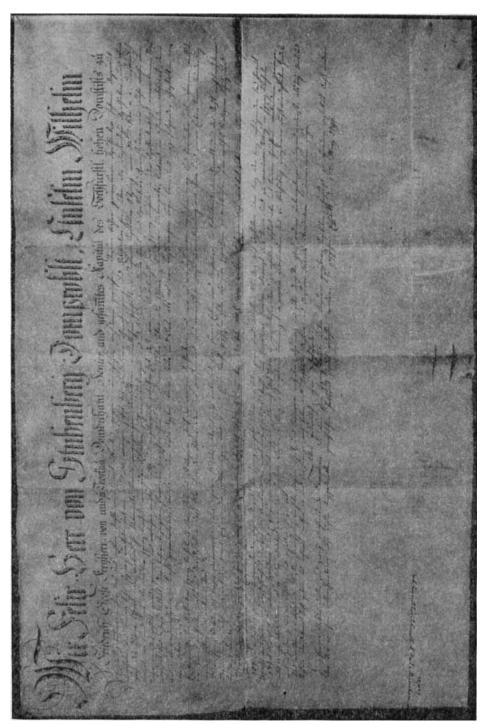
A Max Biechele, born in Eichstaedt in 1839 and, from 1869 on, proprietor for about thirty years, developed considerable literary activity. Thus he wrote a number of pharmaceutical texts (Schelenz, p. 699) and for several years (from 1876 to the beginning of the eighties) edited the Apotheker-Zeitung, Korrespondenzblatt fuer Apotheker, Aerste, Drogisten und Chemiker, founded by Kohlmann in 1866 and edited from Leipzig. (It is not the precursor of the present Apotheker-Zeitung, the organ of the German Apothecaries' Society, but was published in opposition to this organization.) (Schelenz, p. 722; Ph. Ztg., 1872.)

The Franchise.—In addition to the reduced facsimile reproduction of the document, the original text and its translation are herewith given. Comments on the appearance of the document itself are quite unnecessary. The text, however, in spite of the fine handwriting, does not afford ready reading. Not only is the construction very involved, but the German is neither modern nor classical German, but legal German of the close of the eighteenth century. In the English translation an attempt has been made not to destroy the peculiarity of the language, though it was quite impossible to render it into legal English of the same period.

For the benefit of the reader, the preamble has been placed between brackets and the principal idea expressed underscored. If the underlined part of the first paragraph of the English translation be read first, also if the preamble, placed between brackets, be read by itself, a second reading of the first paragraph will make it quite intelligible, whereas without this aid, it is rather difficult to follow the involved construction.

A word concerning the peculiarity of the Italics may not be out of place. A close comparison with the original will reveal that the entire word is not always italicized, but that its ending may be in German script. Furthermore, not all abbreviations are indicated as such by a period.

Herewith follow, in double column for the sake of more ready comparison, the copy of the original German text and its translation.



Certificate of Apothecary's Concession Granted in 1196 to Ignaz Biechele by the Bishopric of Bichstaedt.

Wir Felix Herr von Stubenberg Domprobst,2 Anselm Wilhelm Friedrich Gross Freyherr von und zu Trockau Domdechant,8 Senior, und gesammtes Kapitul des Hochfuerstl. hohen Domstifts zu Eichstaett etc. bekennen fuer uns und unsere Nachkommen. hiemit oeffentlich gegen maenniglichen, nachdeme zwischen Unsern bisher gewesenen Apothecker Johann Nepomuk Biechele und seinen Sohn Ignaz Biechele unterm 23ten Dec. vorigen Jahrs bis zu Unserer Genehmigung, und Ratification hin, ueber die diesseitige Apotheken, und respue sein des Vaters Officin eine verbuendliche Uebergabs-Abrede vorgegangen, derselben wesentlicher Innhalt in Unserer Kapitular Sitzung vom 12ten Febr. a. c. umstaendlich vorgekommen, und dann obbemeldter Ignaz Biechele um gdge Ratification sothaner Uebergab, und dass Wir ihme Unser Haus, und Apotheckers-Gerechtsame, wie solche vorhin sein Vater von Uns gehabt, gnaedig goennen, und verleihen moegten, unthg, und angelegnist gebethen hat, dass wir in Anbetracht sein Ignaz Biechele in der Apotheckerkunst erworbenen Wissenschaft, und Geschicklichkeit, dann bisher bezeigten Fleiss den zwischen ihme, und seinem Vater ueber die Offizin getroffenen Uebergabs-Contract in Gnaden ratificirt, deme auch Unsere Gerechtsame in Kraft gegenwaertigen Briefs, in der bestaendigsten Form, Weis, und Art, als es von Rechtswegen seyn kann, und mag, folgender Gestalten verliehen haben,

Erstlichen Unser Apothecker Ignaz Biechele Unsern Schutz und Privilegium, gleich den vorigen Apotheckern, und wie es von Rechtswegen beschehen mag, und hierunter mit mehreren enthalten, hiermit ertheilen, also und dergestalten, dass Wir, ohne dem Publico, oder Uns anscheinend- und erweissliche grosse Damnificirung mit ihme und seinen Erben keine Abaenderung machen sollen, und wollen. Und da

2do er Ignaz Biechele das Corpus pharmaceviticum aus eigenen Mitteln erkauft, also verbleibet ihme, seinen Erben und Nachkommen die Erlaubniss, der Gewalt, und das Recht, nach beschehener Voranbiethung welche uns nach dem hiemit geziemenden jedesmaligen Vorkauf, und Einstandrecht geschehen solle, als sein Eigenthum zu verkaufen: fuer welches Privilegium, Schutz und Befugniss derselbe

3tio nebst dem ad 45 fl gesetzten Hauszins, weiters pro recognitione alljaehrlich 75 fl.,

We, Felix, Lord of Stubenberg, Cathedral Provost: Anselm William Frederick, Grand Baron of and at Trockau, Cathedral Dean; Senior; and entire chapter of the sovereign exalted bishopric of Eichstaett; etc. herewith publicly proclaim for ourselves and our successors to all concerned that [after a binding agreement, under date of Dec. 23, of last year. had been made between our heretofore apothecary Johann Nepomuk Biechele and his son Ignaz Biechele, concerning the transfer of the local apothecary shop and of his father's officine respectively, subject to our acceptance and ratification, and after the essential contents of such agreement had been considered in detail in the session of the chapter on the twelfth of February of this year, at which the above Ignaz Biechele respectfully and solicitously prayed for the ratification of the aforesaid transfer, also that we might graciously confer on and grant to him our house and apothecary's franchise, which his father had previously held from us;] in view of his, Ignaz Biechele's knowledge acquired in the art of pharmacy and his skill, and further his diligence shown thus far, we have graciously ratified the contract of the transfer of the officine between himself and his father and have granted said franchise in testimony whereof this document is duly signed and sealed, to wit:

Firstly, that like to former apothecaries we grant our apothecary Ignaz Biechele our protection and franchise in accordance with law and custom, and with the reservations mentioned hereafter, and that we shall and will make no change (in our contract) so far as he and his heirs are concerned; provided, however, that no apparent or real damage result from the continuance of the present contract either to the public or to us.

2nd. Inasmuch as said Ignaz Biechele has purchased his stock with his own means, the privilege, power and legal right shall be retained by him and his heirs to sell it as his property, provided, however, that in each and every instance he shall ask us for the first offer, in accordance with the privilege of option and pre-emption that is due us. For this franchise, protection and privilege (the said Ignaz Biechele) shall

3rd. Pay 75 florins annually by way of compensation in addition to the 45 florins

mithin in allem alle Jahr 120 fl., ohne weitere Auflagen, auf was Art selbe immer seyn moechten, verabreichen solle, welcher Hauszins, und *Recognition* aber

4to nur auf solang gemeint und verstanden seyn solle, als sein Ignaz Biechele Vater am Leben seyn wird; inmassen Wir Uns auf desselben ueber kurz oder lang erfolgenden Tod hiemit expresse vorbehalten, nach Beschaffenheit der Zeit und Umstaende ein weiteres jaehrliches Pacht- und Recognitions-Quantum allererst zu bestimmen, und zu conveniren. Wobey er Ignaz Biechele

5to ob Wir gleich die notable Reparationen und Ergaenzungen ueber Uns nehmen, jedannoch das Gebaeu in wesentlichen Stand zu erhalten, sofort alle mit keinem Hauptbau verbundene geringe und ex ipsa inhabitatione, vel ex Culpa inhabitantium an den Fenstern, Oefen, u. d. g. sich ergebende Baumaengel ex propriis zubestreiten, und zu Verhuetung groesserer Busswuerdigkeiten jedesmal in Zeiten zuwenden schuldig und gehalten seyn solle.

Und wie Wir nun obstehender Massen ihme Ignaz Biechele Unsern Schutz und Privilegium ertheilen; also mag und solle derselbe gleich andern untergebenen nirgend anderst, als bey Uns, und Unserm Domdekanat Recht geben, und nehmen, mithin er und die seinigen, auch Erben und Nachkommen Unserer, und Unserer Decanats Jurisdiction unterworfen seyn.

Alles getreulich, ohne Gefaehrde.

Zu mehrerer Urkund dessen sind zwey gleich lautende Exemplaria, das eine Ihme Ignaz Biechele unter Unserm groessern Kapitular-Insiegl zu Handen gestellet, dass andere aber Uns von ihme unterschriebener nebst dessen beygedrueckten gewoehnlichen Pettschaft zurueck gelassen worden. So geschehen Eichstaedt den 4ten Maerz 1796.

rent for the house, hence a total of 120 florins annually, without further assessments of whatever nature they may be.

This house rent and compensation, however, are to remain in effect only so long as his Ignaz Biechele's father lives. After his death, sooner or later, we expressly retain to ourselves the right to demand an additional sum for annual rent and compensation to be determined according to time and circumstances.

5th. That, whereas we take upon ourselves the responsibility to make larger repairs and additions, said Ignaz Biechele is to maintain the building in proper condition and to cause all repairs resulting from wear or tear, or from the negligence of the tenants, on windows, stoves etc. that do not involve changes in the house, to be made at his own expense, also to prevent the necessity of larger repairs.

Inasmuch as we grant said Ignaz Biecheie our protection and franchise, he shall, like our other subjects, neither give nor seek justice elsewhere than with us and the college of our Cathedral Deans, moreover, he and his family, also his heirs and descendants, shall be subject to the jurisdiction of our said college.

The above is a true copy, to the best of our knowledge and belief.

This agreement has been issued in duplicate, one copy, to which our large chapter seal has been attached, has been issued to said Ignaz Biechele; the other copy has been left with us after his signature and customary seal have been affixed thereto. Thus done in Eichstaedt, March 4th, 1796.

REFERENCES.

- Felix: In Die Bischoefe und Reichsfuersten von Eichstaedt, Sax mentions both Josef and Felix von Stubenberg as the only two relatives who were provided for in the Domkapitel by Raymond Anton, Count of Strasoldo, their uncle (p. 711), who was the sixty-sixth Bishop and Reichfuerst of Eichstaedt from 1757 to 1787 (p. 653). Whereas the older brother became the sixty-eighth and last Bishop and Reichsfuerst, known officially as Joseph I, Count of Stubenberg, from 1790 to 1802, the younger brother as Domprobst became his right hand (p. 715). Even after secularization of the stift, Felix was appointed Weihbischof and retained the position of Domprobst with a salary of 2500 fl. (p. 780).
- a. Probst, Eng. provost, from the ecclesiastical Latin term præpositus, one who is placed before, i.e., at the head as chairman or presiding officer.
 - b. Dom, probably from the Latin domus, house, the ecclesia cathedralis or ecclesia

major, i.e., the principal church of a district, characterized by its extent and architectural grandeur. Like the use of the word cathedral (from cathedra, chair, i.e., of the bishop), the word dom came into use in Germany as late as the eighteenth century.

c. Domprobst, inasmuch as the Dom had its college of canons, the Domprobst is the presiding officer or officer of first rank of the college or chapter (Ger. Kapitel).

- ^a Dechant-Dekan, Eng. dean, Lat. decimus, in the Roman military system a leader of ten men. Hence in clerical history originally the presiding monk over a group of ten monks. Later the term was applied to a variety of presiding church or monastic officers. Thus in the chapter (Ger. Kapitel) atached to the Dom, the Domdechant is the second officer in rank next to the Domprobst. In the absence of a Probst the Dechant is the first officer of the Dom.
- * Senior, comparative of senex, genitive senis, the older one (or oldest), an honorary designation, the presiding officer.
- * Stift, a charitable foundation, such as the chapter attached to the Dom. Originally a purely clerical institution, after the fourteenth century a distinction was made between the secular canons and canonici regulares who had taken the oath of monkhood and who either lived together in monasteries or who were used in connection with the cathedral (Dom) service but who had no vote in the chapter. Previous to their secularization in 1803 many of these Stifter (among them Cologne, Eichstaedt, Basel), abbeys, etc., possessed state rights in the Holy Roman Empire and had a vote in the Reichstag.
- Eichstaedt, now a Bavarian district, also a city, the principal community of the district, owes its origin to St. Boniface, who in 745 installed Willibald, the Anglo-Saxon, as bishop over the territory granted by Count Suitger. The pilgrimage made to the relics of St. Walpurgis, brought thither in 870, and to the grave of St. Willibald developed the place which acquired city rights as early as 908. In the course of time it became one of the wealthiest Hochstifter of Germany. In 1785, i.e., eleven years before this document was issued, it covered an area of 1100 square kilometers, with 57,000 inhabitants in 8 small cities, 14 markets (Marktflecken) and 200 villages, etc. The detailed history of Eichstaedt is to be found in two treatises: Lefflad: Registen der Bischoefe von Eichstaedt, 2 vols., Eichstaedt, 1871-1874. Sax: Die Bischoefe und Reichsfuersten von Eichstaedt, 745-1806, 2 vols., Landshut, 1884-1885.
- Biechele: Neither Schelenz nor Frederking nor Philippe-Ludwig mentions either father or son. Schelenz, Geschichte der Pharmazie, p. 699, mentions a Max Biechele, who was born September 11, 1839, in Eichstaett, and who became proprietor of the local apothecary shop in 1869. He is known principally as an author of condensed pharmaceutical compilations and of the "Legal Regulations for Bavaria." For the information gleaned from other sources, see the Introduction.

Acknowledgments.—As already stated, the parchment document is the property of the Library of the University of Wisconsin. The manuscript text of the document, while written in a fine hand, is composed in the legal German jargon of the eighteenth century, hence affords more than ordinary difficulties in translation. For overcoming these difficulties, the writer is greatly indebted to his colleague, Dr. Edwin Roedder, Associate Professor of German Philology. In the revision of the English translation, the writer was kindly assisted by another colleague, namely Professor Eugene Gilmore of the College of Law.

LIST OF PAPERS THAT HAVE PRECEDED THE FOREGOING CONTRIBUTION.

- 1. Common Salt Mixture. Ph. Rev., 14, p. 107. A description of two packages of disinfectant such as were used at Camp Randall, Madison, Wisconsin, during the Civil War. One of these had been put up by the U. S. Army Laboratory, the other by E. R. Squibb.
- 2. Early Phases in the Development of Pharmaceutical Legislation in Wisconsin. Ph. Rev., 15, pp. 201, 223, 240; 17, pp. 56, 136, 283, 223. Reprinted in pamphlet form, p. 43,

See footnote, first page of Historical Fragments (contribution No. 15).

by the Pharmaceutical Review Publ. Co. of Milwaukee. A collection of documents with brief comments. With the aid of newspapers and the records of the common council of Milwaukee it was made possible to give an account of the history of the first local pharmaceutical legislation which served as a stepping stone to state legislation a few years later.

- 3. The Letter A: Its Meaning in Pharmaceutical Literature. Ph. Rev., 18, pp. 112 and 349. A preliminary report of a larger compilation ultimately to include all of the letters of the alphabet.
 - 4. The Apothecary and the German Totentaenze. Ph. Rev., 17, p. 290.
 - 5. Christ as Apothecary. Ph. Rev., 18, p. 338; ibidem, 19, p. 18.
- 6. Ex Libris. Reproduction of pharmaceutical book-plates: that of the Swiss Pharm. Society (Ph. Rev., 18, p. 440); Pharmaceutical Institute of the University of Bern (ibidem, 18, p. 484); of Prof. A. Tschirch of Bern (ibidem, 19, p. 95); of Dr. Oesterle of Bern (ibidem, p. 239); of Dr. E. O. Merck of Darmstadt (ibidem, 21, p. 457); of Dr. Louis Merck of Darmstadt (ibidem, p. 458).
- 7. Pharmaceutical Legislation in New York During the Early Seventies. *Ph. Rev.*, 21, p. 482; 22, p. 31. One of the principal objects in publishing these documents was to bring out, if possible, other documents that might be hidden, and to induce those who lived through this episode to write their reminiscences of the period after a perusal of the editorials and communications which were written while feeling ran high.
- 7. Drugs of Primitive Peoples. Ph. Rev., 22, p. 241. An illustrated review of Max Bartels, Medizin der Naturvoelker, so far as drugs and drug containers are concerned.
- 8. Borneo Camphor. Ph. Rev., 23, p. 7. An illustrated account of the primitive methods of collection of this valuable product and of the superstitions concerning it held by the Malay collectors, based largely on W. H. Furness, The Head Hunters of Borneo.
- 9. Pharmaceutical Notes from Cuming's Tour of the West. Ph. Rev., 23, p. 15. Notes taken from the account by this Englishman of his trip down the Ohio in 1808 and republished as vol. iv of Early Western Travels, edited by R. G. Thwaites.
- 10. Pharmaceutical Notes from the Diary of André Michaux. Ph. Rev., 23, p. 53. The accounts of the travels of the elder Michaux, between 1793 and 1796, as presented to the American Philosophical Society by his son in 1824 and republished in vol. iii of Early Western Travels, afforded gleanings to American materia medica.
- 11. Pharmaceutical Notes from the Journal of François André Michaux. Ph. Rev., 23, p. 86. The Journal of the younger Michaux, also republished in vol. iii of Early Western Travels, likewise afforded gleanings of interest to our materia medica, even more numerous than the diary of his father.
- 12. Harris' Journal of a Tour. Ph. Rev., 23, p. 92. This constitutes the third reprint published as vol. iii of Early Western Travels, edited by Thwaites. The complete title is The Journal of a Tour into the Territory Northwest of the Alleghany Mountains, Made in the Spring of the Year.
- 13. Drugs of North American Indians. Ph. Rev., 23, p. 130. A catalogue of medicinal plants and their uses found in the list of economic plants of O. T. Mason's account of The Ray Collection from Hupa Reservation, as published in the Smithsonian Report for 1886. Part I, pp. 205-239.
- 14. Pharmaceutical Notes from Nuttall's Journal of Travel into the Arkansas Territory. Ph. Rev., 26, p. 19. Gleanings for a Materia Medica Americana from Nuttall's diary (1819), republished in vol. 13 of Early Western Travels, edited by Thwaites.

Other historical articles not included in the above list are:

- 1. The Reber Collection. *Ph. Rev.*, vol. 25. a. General description, p. 161; b. Pharmaceutical vases of Italian faience and majolia, p. 193; c. Some French pharmaceutical pots, p. 236.
- 2. Johann David Schoepf. Introduction to Materia Medica Americana, republished as Bulletin No. 6, 1903, of the Lloyd Library.