HISTORY OF HIST. II. ON PROBATION (1, 2)

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Introduction

One of the more important results of the reorganization of the American Chemical Society (ACS) in 1890 was the advent of the national meeting, in which the society broke from its cocoon in New York City and spread its wings to envelop chemists throughout the country as active participants (3). Registration statistics for the last decade of the nineteenth century are meager, but it appears that no more than a few hundred people attended this usually biannual affair.

The growth of chemical activity in both academe and industry during that time led inevitably to specialization as chemists in general and the society in particular attempted to cope with a flood of new information. The first time papers at a national meeting were segregated by subject occurred at the World's Congress of Chemists in Chicago in 1893, when 76 presentations were arranged in nine different categories (4). Nevertheless, for the next ten years national meetings of the ACS consisted of single sessions, often with long general interest papers and what seems to be considerable emphasis on social events.

In 1903 the ACS Council appointed a committee to study the feasibility of forming divisions organized along technical lines. At its next meeting the Council rejected the committee's recommendations that five groups be formed (5). Yet at the next national meeting in Philadelphia in December, 1904, the large number of papers submitted required a new mechanism to fit them into the four-day period. For the first time the initial general session was followed by simultaneous sessions for papers in five specialties—physical, organic, inorganic, and industrial chemistry, plus a larger group that included agricultural, sanitary, and physiological chemistry (6).

Pressure was building on the society from another direction as well, however. A number of new organizations were being formed that focused on a specific area of chemistry, and many ACS members were joining these new societies (Fig. 1). In January, 1908, the ACS Council formed the ACS Division of Industrial Chemists and Chemical Engineers. By the end of that year there were four more divisions: agricultural and food chemistry, fertilizer chemistry, organic chemistry, and physical and inorganic chemistry. All of these groups had been loosely organized into what were called sections since the Philadelphia meeting and now were given a formal status (7). According to ACS Secretary Charles L. Parsons, "Each division has every advantage which can come to an entirely separate organization and enjoys likewise the great additional advantage which comes with union and strength in numbers, functioning independently and conducting their specialized affairs and programs with almost complete autonomy (8)." In fact, each division had "the right to elect their own officers, to draw up their own by-laws subject to approval of the Council. . .and to collect, control, and manage funds to be expended for their own purposes (8)." It was an obvious attempt at

Year	Society	Percent Charter Members also ACS
1902	[American] Electrochemical Society	29% (of 350)
1906	New York Section, Society of Chemical Industry	25% (of 3079)
1906	American Society of Biological Chemists	50%
1908	American Institute of Chemical Engineers ("many," including all officers)	

***Figure 1**. New Organizations Formed out of the ACS 1902–1908 (10)*

preventing more ACS members from bolting from the society and forming new specialty organizations.

By the time Edgar Fahs Smith and Charles A, Browne held the first HIST meeting under a shade tree on the campus of Northwestern University in August, 1921 (2), five more divisions had been added; and five more were in the required "probationary" period. Called "sections" rather than "divisions," these probationary groups had to hold "a sufficient number of successful meetings to prove the need for them" and thus be approved by the ACS Council (8). At the end of the second informal HIST meeting held in Rochester, NY in April, 1921, Smith rejected a suggestion to form a "Section of Historical Chemistry," preferring to "let things develop freely and spontaneously." Smith was convinced that there would be more interest developed in this manner rather than a formal schedule of papers as a section or division might arrange (2).

Preparing for the New York Meeting (Fall 1921)

That situation was soon to change. During the summer of 1921 Smith and Browne continued to correspond, exchanging photographs, books, autographs, and information about recent additions to their respective collections (9). In addition, they discussed the forthcoming ACS meeting in New York, at which a portrait of Priestley, copied from the original by Stuart, would be presented and subsequently be given to the National Museum in Washington. They were also concerned about the fate of the Priestley house in Northumberland, and Smith expressed the feeling that "I can't get it out of my head that the house ought to become the property of the American Chemical Society (10)." In late May Smith told Browne, "We must try hard to have a meeting of those interested in the history of science at the next general meeting of the Society in September. I fancy there will be a great many more attend than came the last time (11)."

Two months later Browne told Smith that his "announcement about our **historical section** has set me to thinking and last night I went over my papers to see what I could find of interest (12)." In view of the expected visitors from England, Browne solicited Smith's opinion about his discussing "the relations between Old England and New England in alchemy and chemistry," including the relations of Robert Boyle and others with George Starkey, John Winthrop, Robert Child, and Jonathan Brewster (12, 13).

Just a month before the New York meeting Smith told Browne that he "had a letter from Professor [Lyman C.] Newell of Boston, who tells me that he is coming to New York and hopes our little history section will meet, as he has some portraits and letters he would like to show (14)." Browne responded three days later, indicating that he would have a "twenty-minute paper subtitled 'A Sketch of Alchemy in Seventeenth- century New England' for the historical section, **if we meet**, and some photographs of old letters (15)." Smith responded somewhat petulantly, "Of course the History Group will meet. [Frank B.] Dains will be there. Newell is coming with letters and books, and [Wilder D.] Bancroft desires three minutes for the presentation of some ancient point. Adolph, a professor from China, is prepared to give us some points in early chemistry in that land (16)."

Evidently prompted by Browne's preparation of a paper, Smith sent Browne a short manuscript that he thought he would read "before our Section on the History of Chemistry." Titled "The First History of Chemistry in the English Language," it discussed the "Introductory Lecture" written by Thomas Cooper and published in Carlisle, PA in 1812. Smith claimed it was the "first history of science in our tongue, and written here in America." He asked Browne, "Do you think it will do (17)?" Browne assured him that "your contribution will, I am certain, interest everyone in our history section." He then indicated that he was bringing to New York photostatic copies of the early alchemy letters written in New England between 1630 and 1660, a copy of the earliest bill (1632) for chemicals and apparatus shipped to America, a copy of George Starkey's letter—the first chemical letter written by the graduate of an American college in 1646, a copy of one of Jonathan Brewster's manuscripts upon alchemy written in 1653, and copies of letters written by Sir Robert Boyle, Robert Child, and others (18).

In that same letter Browne committed a potentially egregious error by adding after his comment on Cooper's history, "There was a *Sketch of the Revolutions in Chemistry* published by T. P. Smith in Philadelphia in 1798. Have you ever seen this and does it deal at all with the history of chemistry?" Smith wrote back the very next day, although he kindly slipped his response to Browne's question between two other topics (19). "I have a copy of the *Revolutions in Chemistry* by Thomas P. Smith, and I had it reprinted in my book entitled *Chemistry in America* published by Appleton's in 1914 (20). I may bring the copy over." Somewhat sheepishly Browne confessed that "it is strange that I should have forgotten the account of Thomas P. Smith in your *Chemistry in America*, which has been constantly within arm's reach of my desk ever since it appeared in 1914. I immediately re-read your account of him; his oration on the *Revolutions in Chemistry* impressed me as a remarkable effort for a young man of 21 (21)."

Smith did compliment Browne, however, pointing out that "those are perfect treasures which you are going to show us in regard to the alchemists, and in my Address to the Society I am going to mention them as having been brought to light by you (22)." Smith then continued, "Shall we try to give our Section on the History of Chemistry more prominence? Do you think we could prevail upon Dr. [Charles] Herty to give us a page of his *Journal* in which to place such things as may interest American chemists in the history of Science? (18, 23)" Thus it is clear that in spite of Smith's remarks about not wanting a Section at the Rochester meeting, his exchanges with Browne during the summer of 1921 show that by the time of the New York meeting in September he had all but abandoned that feeling and was already talking about the group as a Section of the History of Chemistry (even though it did not formally exist), encouraging others to participate, and even thinking about getting items published in the Society's literature.

The New York Meeting (Spring 1921)

The 62nd national ACS meeting in New York was an elaborate affair that attracted 1557 registrants, the third largest in the Society's history to that date. It was billed as "Chemistry's Greatest Rally" because it was sandwiched in between two other important events. The British Society of Chemical Industry was meeting at McGill University in Montreal from August 29–31, after which the overseas delegation and many Canadian members visited Canadian chemical industry sites in Toronto and Ottawa before crossing the border to meet in joint session with the ACS on September 5–11. A special train carrying the foreign guests was met at the border by a delegation headed by the governor of New York and including Smith (as ACS president), Charles Chandler, Ira Remsen, Marston T, Bogert, and William H. Nichols. After tours of American chemical industry sites in Niagara Falls, the group traveled to Syracuse, where they were given a tour of the Solvay plant. From there they proceeded to Albany, and took a night boat down the Hudson to New York. After the ACS meeting closed on September 11, the Seventh National Chemical Exposition opened the next day at the East Coast Armory, thus providing a complete package of chemical activities (24).

The history of chemistry group is not mentioned in any of the advanced notices for the meeting's sessions, but registrants received a small 4 x 8.75 inch program that fit easily into a coat pocket. On page 2 there were several announcements, including one which said (25):

> History of Chemistry—President Edgar Fahs Smith and kindred spirits will meet Friday afternoon, September 9, in Room 301, Mines, to discuss their hobbies.

Friday was the last day of the official meeting, with Saturday scheduled for "golf and tea" and Sunday a "boat trip and tea." As at Rochester (2), Smith tacked this session on to the end of the meeting and in fact did not specify a time. But it was shrewdly scheduled to follow the inaugural meeting of the Section of Chemical Education (CHED), which Smith had organized (26). Since Smith chaired the CHED session, it must have been easy for him to segue into the history session. More than 100 people, swelled by CHED attendees, assembled into the little crowded room at Columbia to hear Smith and others "discuss their hobbies," undoubtedly surprising but pleasing Smith and Browne.

There is no indication that Smith read his paper on Thomas Cooper, but he did start the program by talking about his favorite subject, Joseph Priestley, and "the benefits derived from a study of the history of … American chemists (27)." Lyman Newell explained methods for preserving letters and documents, and how the collecting of old portraits and books could be used in the teaching of the history of chemistry. Charles Browne did describe the history of alchemy in New England. In addition to these three who would become HIST stalwarts, other speakers included a Dr. Goldsmith, H. G. Byers of Cooper Union, Charles A. Doremus, a Dr. Adolph of Shanttung, Christian College, K. C. Pandya from India, and Ernest Cohen of the University of Utrecht (27).

At the conclusion of the session, which included an impressive display of old books, letters, autographs, and portraits, "several men spoke enthusiastically of the proposed plan of having regular meetings devoted to the history of chemistry. This meeting was an inspiration to those who were familiar with the history of chemistry and a revelation to many whose interest in this field was sincere but dormant." As a result of the large turnout and supportive response, steps were taken in New York officially to form a Section of the History of Chemistry (28). It seems to have been a lively session that must have ended late. For Smith it was a tiring day. Not only had he chaired two sessions that afternoon of the two groups he was instrumental in organizing, but he was scheduled to deliver his presidential and public address that evening at 8 P.M. (22).

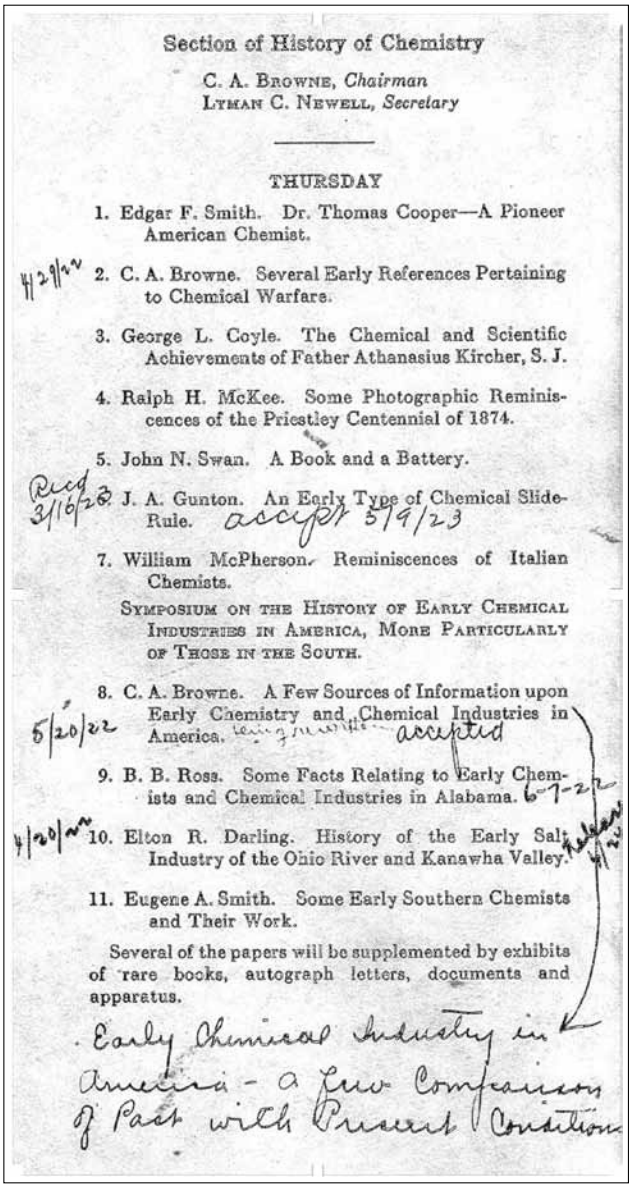
On to Birmingham

Five days after this meeting, Smith wrote Browne thanking him for what he "did for the group on the History of Chemistry (29)." Wondering if "we are not going to get a pretty big Section on the History of Chemistry," Smith noted that he had "just written Dr. Parsons that we wanted to have a definite period set aside for us at Birmingham and at Pittsburgh next Spring and Fall. Some of us will be there and we want to continue these conferences (29)."

The correspondence between Smith and Browne during the interval between the New York and Birmingham meetings continued at a steady pace. Smith promised Browne that he would "do everything to advance the meetings of the Section on the History of Chemistry" and encouraged Browne to "take up the very earliest chemistry of this country and develop it. Let it be your field (30)." It appears as if this were Smith's way of staking out territory for further investigation, because he intended "to work up individuals who lived and worked after the Revolutionary War (30)."

Smith was enamored of another project as well, telling Browne, "For some reason I can't free myself from the idea that we ought to have a Journal devoted to the interests of the history of chemistry. This idea is not prompted by any idea on my part to become an editor or anything of that kind. You and Newell could do that work, but I believe that maybe I could collect money for such [from] a foundation. When you continue to think of it, there are a good many sides to the history of chemistry here in America that need to be brought to light (31, 32)." That was a mantra Smith would espouse to anyone who would listen—that the new Section should focus on the history of chemistry in America.

In October Browne informed Smith that Dr. Ralph McKee of Columbia University had recently "dug up" seven of the old photographic negatives, 8 x 8 inches, that were taken at the Priestley Memorial Celebration in Northumberland in 1874 (33)." McKee took the plates to a photographer, who pronounced them all "practically



Section of History of Chemistry

C. A. Browne, *Chairman*
Lyman C. Newell, *Secretary*

THURSDAY

1. Edgar F. Smith. Dr. Thomas Cooper—A Pioneer American Chemist.
2. C. A. Browne. Several Early References Pertaining to Chemical Warfare.
3. George L. Coyle. The Chemical and Scientific Achievements of Father Athanasius Kircher, S. J.
4. Ralph H. McKee. Some Photographic Reminiscences of the Priestley Centennial of 1874.
5. John N. Swan. A Book and a Battery.
6. J. A. Gunton. An Early Type of Chemical Slide-Rule.

Symposium on the History of Early Chemical Industries in America, More Particularly of Those in the South.

7. William McPherson. Reminiscences of Italian Chemists.
8. C. A. Browne. A Few Sources of Information upon Early Chemistry and Chemical Industries in America.
9. B. B. Ross. Some Facts Relating to Early Chemists and Chemical Industries in Alabama.
10. Elton R. Darling. History of the Early Salt Industry of the Ohio River and Kanawha Valley.
11. Eugene A. Smith. Some Early Southern Chemists and Their Work.

Several of the papers will be supplemented by exhibits of rare books, autograph letters, documents and apparatus.

***Figure 2**. Program of the first meeting of the Section of History of Chemistry, Birmingham AL, 1922. This is a photocopy of an original uncataloged program found in a closet at ACS headquarters by the author. Handwriting source is unknown but might be that of ACS Secretary Charles L. Parsons.*

as good as new" and was having prints made of them. Browne speculated that these old views might be of sufficient importance to interest many members of our Society. "I imagine that prints made from those plates could be sent to members who desire them at nominal cost (33, 34)."

Later that month Browne met with Arthur Lamb, editor of the *Journal of the American Chemical* Society, at the dedication of the new chemical laboratory at Dartmouth, discussing the possibility of "printing papers relating to historical chemistry in America. He believes very strongly that steps should be taken to do this in some way, either as monographs or possibly as journal articles (35)." Browne told the twenty-five chemistry professors at the dedication ceremonies about the wealth of historic materials relating to chemistry in this century, "and they were all anxious to have it studied and written up (35)." As a result of his conversation with Browne at Dartmouth, Lamb began taking an inventory of the early chemical apparatus at Harvard. Browne suggested to Smith that "the descriptions and photographs of early chemical apparatus in this country in college museums, in scientific institutions, and in private collections would make a very interesting monograph (36)."

***Figure 3**. Edgar Fahs Smith, University of Pennsylvania, Co-founder of HIST, at his desk with a portion of his collection in the history of chemistry in the background. Edgar Fahs Smith Collection, University of Pennsylvania Libraries*

Just six weeks before the Spring National ACS meeting in Birmingham, the first in which HIST would be on the formal program, Browne received a surprising letter from ACS Secretary Charles L. Parsons. As he related to Smith, "Dr. Parsons has just informed me, much to my surprise, of my appointment as chairman of the Section of Historical Chemistry (37). I regret greatly that you did [not] continue in this office, for without your fostering care this new section may not long survive (38)." Brief written accounts of the early days of HIST are not in agreement on this point, and the implication has always been that Browne was elected chairman at the New York meeting. This letter makes it clear that while it was decided to form a Section at the New York meeting, it was assumed Smith would be the chairman of the new group as he had chaired the informal meetings at Rochester and New York. Further, there was no election of Browne as chair as commonly assumed—he was appointed by Parsons many months after the New York meeting, certainly under Smith's direction as ACS president.

Having been ill with influenza, Browne now faced another dilemma, that of producing a program on such short notice. Complaining to Smith that "it is rather late in the day to begin on a program and as I am still very weak, it is not possible for me to do very much (38)." Nevertheless, Browne pledged "to do my best to assist Professor Newell in getting up some sort of a program (39)." Yet in the same letter he plunged ahead with his ideas. "It occurs to me that as we are meeting this time in Birmingham it might be well to have something on our program about the history of chemistry in the South (40). I might say something about John Clayton's old chemical tract on the "Observations of Virginia," written in 1688 to the Royal Society, in which there is much of historical interest. A brief history of the early indigo, turpentine, sugar, potash, salt and saltpeter industries of the South by various members of the Society might be given. A few remarks about old teachers of chemistry in the South might be interesting and in this connection I am wondering if you could talk about Dr. Thomas Cooper's relations with Southern villages, such as negotiations with Jefferson at the University of Virginia and his last years at Columbia in South Carolina (41). If you have any suggestions I would like to have them." Finally, Browne remembered that "some time ago Professor McKee told me he would like to speak of certain mementos of the Priestley Centennial in Northumberland at the next meeting of the historical section (38)."

In his reply Smith assured Browne that "nobody else was thought of for the Chairmanship of the Section on Chemical History than your good self (42)." In terms of the program, Smith counseled Browne, "Don't worry about papers. Ask McKee to present whatever

he wishes. I will have something on Dr. Cooper and some old books. You would do well if you would give a sketch of the earliest industries throughout the South, to which you have referred." Smith was also confident about the forthcoming Birmingham meeting, stating that "The Section is bound to go. There will be others there and I am sure we will have a very enjoyable and profitable meeting (42)."

The Chandler Medal

Prior to going to Birmingham, Browne attended the presentation of the Chandler Medal to Smith at the Faculty Club of Columbia University on the evening of March 3, 1922. While this was not a HIST event, the account of the affair Browne wrote in his journal is a fascinating snapshot of chemical history at several levels. (43)

> At the lecture room of Havemeyer, Smith delivered a most interesting address upon Dr. Samuel Latham Mitchell, who was Professor of Chemistry at Columbia from 1792 to 1831 (44). Dr. Smith spoke with his usual charming delivery and his address was warmly applauded. At the conclusion of his remarks the Chandler medal, which is presented each year to some recipient for worthy work in chemistry, was presented to Professor Smith by old Dr. Chandler himself (45). The picture of the aged scientist with his white hair and mustache, now in his 86th year, presenting the medal to Dr. Smith, who is in his 66th year, was a memorable one. They stood before the lecture room desk and after an impressive pause, Dr. Chandler said that he seemed almost an interloper on such an occasion as this.… Yet he rejoiced to hand the medal which bore his effigy to his old friend Dr. Smith and nothing gave him greater pleasure. Professor Smith in responding said that he and Dr. Chandler both studied under the same old master Wöhler in Göttingen, a name whom they both idolized and that to receive the medal from the hands of his old friend seemed the crowning event in their long friendship.

The Birmingham Meeting (Spring 1922)

The 63rd Annual Meeting of the ACS held in Birmingham on April 3–7, 1922, drew fewer than 400 registrants. The Divisional and Sectional meetings were planned to be held in the Sunday school rooms of the First Methodist Church, the first time a religious structure was used for a Society meeting. In an editorial in the *Journal of Industrial and Engineering Chemistry* it was noted that this arrangement was secured "after due consideration," but concluded that "the balance was swung in our favor by the fact that the church authorities recognize the efforts of chemists to ascertain the truth (46)."

For the first time the "History of Chemistry" Section was listed on the official program, along with nine divisions and three other sections (47). Browne and Newell put together a very respectable program of eleven papers, including four papers in the very first HIST symposium on the "History of Early Chemical Industries in America, More Particularly of Those in the South (48)." Over 100 people attended the session, which is quite remarkable since it accounts for more than twenty-five percent of the total registration, and it was scheduled for the last afternoon of the meeting (Thursday). It was probably one of the largest sessions of the entire meeting and a proud inaugural for a brand new section. Smith was serving his second consecutive year as ACS president and was still Chairman of CHED, whose members had met all day on Wednesday and Thursday morning. According to Browne's official reports (49, 50), Smith opened the session with "an entertaining address upon the life and work of Dr. Thomas Cooper." He was followed by Rev. George L. Coyle, who discussed the work of Father Athanasius Kircher, a seventeenth-century scientist noted for his opposition to alchemy. Ralph McKee described the photographs of the Priestley Centennial at Northumberland and Browne exhibited the photographs. John N. Swan displayed an early battery used by Sir Humphrey Davy and spoke about Davy's electrolysis experiments. He was followed by J. A. Gunton, who showed an early chemical slide rule and described its origin and use. The general papers concluded with William McPherson, who "spoke entertainingly upon reminiscences of celebrated Italian chemists."

Browne led off his little symposium with a paper on the sources of information of early chemistry and chemical industries in America. He mentioned that one of the first pieces of chemical work performed in America "was an assay of silver ores by Spanish explorers in Arizona in 1598." He was followed by B. B. Ross, who discussed the early indigo, sugar, and other industries in the South. He said that the first plant for artificial refrigeration in the U.S. "was built by Dr. John Gorrie of Apalachicola, Florida," who patented the process in 1850. Ross also described the work of Professor John Darby at East Alabama College and exhibited a Berzelius alcohol lamp that he used. Elton R. Darling's paper covered the early salt industry of the Ohio River and Kanawha Valley. The symposium concluded with the reading of a paper by Dr. Eugene A. Smith, which covered the work of many early Southern chemists. Smith summed up

the program by "making a strong plea for historical chemical research in America in the different sections of the United States." Continuing the tradition established at the previous informal meetings, there was "an exhibit of rare books, letters, photographs, and apparatus" which proved to be very popular with the attendees (49, 50).

Browne's Personal Account of Birmingham

Detailed accounts of personal experiences at ACS meetings are rare. Browne was very loquacious about the Birmingham meeting in his private journal, probably because it was an historic occasion and the official birth of HIST. Because Browne's notes are in unpublished typescript form, it is of interest to review the HIST session again, reproducing here much of what Browne said about the Birmingham meeting (43) in his own words. What follows is a much more colorful account of Birmingham than the terse, sanitized versions Browne wrote for the ACS (49).

Figure 4. *Charles A. Browne, Edgar Fahs Smith Collection, University of Pennsylvania Libraries*

After paying his registration fee of $3.00 and securing his badge at the Tutwiler Hotel (where rooms could be had for $2.50 to $8.00), Browne ran into Smith and they "had a long chat in the hotel lobby." Smith talked about Thomas Cooper and his recent visit to Cooper's grandson, "a man of very irritable temper, who remarked to Professor Smith that he inherited his grandfather's "cantankerous nature." Smith again brought up the idea of a Journal of Historical Chemistry, but Browne "did not think over one percent of the membership had an interest in the historical side of the subject." Smith "admitted that only a few chemists were interested in historical chemistry (51)." They talked briefly about the Priestley House (52) before moving on to a proposed bibliography "of all the early American text-books upon chemistry." Smith said that E. J. Crane was compiling such a bibliography (53). Browne mentioned an early book by Thomas Ewell of Virginia published in 1806 (54) "as one of the earliest such texts," and Smith responded that he was familiar with the book and that Ewell, a graduate of the University of Pennsylvania Medical School, "was quite a character, being a man of strong pugnacious disposition."

Then Smith "said that his researches in historical chemistry were confined mostly to the personalities of the men who influenced American chemistry in the early days. The history of early chemical industries in America and of other phases of the subject he was willing to leave to me and other investigators," effectively making it clear to Browne how the research territory should be divided. The discussion ended with a complaint by Smith that the flooding of his laboratory by a careless student who left water running destroyed many of his valuable tungstic acid samples but more importantly had damaged some of his rare books and prints, an incident "that disturbed Smith a great deal."

On Wednesday Browne found himself in more discussions with Smith, who related in great detail his oral examination by Wöhler, and Browne responded with his own experiences (55). They agreed that qualitative analysis was "the very best preparation for a beginner of chemistry. It gave the student a training in observation and logical deduction such as could be obtained in no other way." Smith related an amusing story about J. L. Smith, the second president of the American Chemical Society, who "was lecturing to his class upon nitrogen. A visiting professor asked how he prepared such large quantities of the gas. Smith…told his visitor that what he saw in the cylinders was not nitrogen at all but carbon dioxide. It answered the purposes of his demonstrations just as well and the students were none the wiser."

That evening Smith complained to Browne that "he had been bothered all the day and evening by long distance calls from politicians in Philadelphia who were urging him to accept the Republican nomination for the Governorship of Pennsylvania. The four factions of the Republican party could not come to an agreement but were willing to compromise upon him as a candidate." Smith rejected the offer as "he knew better than any one what a terrible life a Governor of Pennsylvania had to lead," having been "the close personal friend of six governors…while he was Provost of the University of Pennsylvania." Browne countered with the opinion that it seemed "a unique opportunity for an American chemist to accomplish something in the way of public service." The next day Browne asked what the final disposition was, and Smith "laughed and said that he telephoned… his refusal to accept the nomination…." Smith intended "to be true to chemistry last as well as first," to which

Browne replied, "I'm glad for Chemistry but sorry for Pennsylvania."

The day of the HIST session Browne met "John N. Swan of the University of Mississippi who asked that he be allowed to give his paper for the historical section in the morning session before the Educational Section, as he wished to send back the exhibits on an early train by an assistant. I consented to this and went to the Educational meeting to hear his paper (56). He exhibited an old battery which had formerly been part of a series of cells that belonged to Sir Humphry Davy at the Royal Institution. This cell came afterwards into the possession of J. [John] Millington, who brought it to this country with other apparatus in 1848 when he accepted a professorship at the University of Mississippi (57)."

Chairing the First HIST Meeting

"I dropped into the meeting of the sugar chemists for a short time and then returned to my room to arrange the material for the meeting of the historical section which I called at 2:10. Two rooms had been thrown together on the lower floor of the Sunday Schoo1 building at the left of the entrance. The room to my surprise was quickly filled and over 100 chemists were present.

After calling the attention of the section to two recent works upon the history of chemistry, viz. Gunther's *Early Chemistry at Oxford* (58) and Lippmann's *Chronological Tables on the History of Organic Chemistry* (59), I introduced Professor Smith who spoke for an hour upon Dr. Thomas Cooper and his work as a pioneer chemist in America. It was a most interesting address and was delivered with all that charm of manner which characterizes the public speaking of Professor Smith. He spoke without notes or manuscript, and could have held his audience for another hour without difficulty.

The next speaker was Father Coyle (60), who read an interesting paper upon the chemical and scientific work of Father Athanasius Kircher. I passed around my old copy of Father Kircher's "Magnes" for inspection during the reading (61). Attention was called to Father Kircher's opposition to alchemy and to his having hinted at the bacterial cause of diseases and many other later discoveries. In the absence of Professor McKee, who was to talk upon some photographic reminiscences of the Priestley Centennial of 1874, I exhibited my set of the Centennial photographs and asked if any could recognize some of those we had not identified, that the names be marked upon the key. I read a letter of Professor S. P. Sharples which was written immediately after the Centennial meeting (49).

Dr. J. A. Gunton next exhibited an early chemical slide rule, of which he gave an account and description of its use. The next speaker was Professor Wm. McPherson of Ohio State University. Professor McPherson said his subject of Italian chemists was so foreign to 'Chemistry in America,' the main theme of the meeting, that he thought it a pity to spoil the continuity of the program and offered to withdraw. I thanked him for the courtesy but remarked that a slight break in this continuity might be a welcome change and invited him to speak if only for 15 minutes. He thereupon gave a short delightful talk upon a few of the great Italians, such as Avogadro, Cannizzaro, Ciamician, and others who have influenced chemistry.

In opening the symposium on the history of early chemical industries in America, I remarked that while quantitative chemical control in American chemical industries did not begin until after the Civil War (the time when quantitative analysis first began to be taught in American colleges), yet there were many industries which we now call chemical that went back to the earliest colonial times. I then told of the work which the Spaniards did upon the assaying of silver ores in New Mexico and Arizona in 1598, according to the unpublished records in the Spanish archives of which I read the manuscript in the Library of Congress the previous Saturday. With this introduction I read my paper upon 'Early Chemistry and Chemical Industries in America,' which I supplemented with exhibits of books, photographs, Photostats, and old prints. At the conclusion of my paper President Smith spoke to the section upon the importance of investigating the early sources of information upon the history of chemistry in America. He alluded to my investigations upon the history of alchemy in America, which were presented at the New York meeting last September, and which he hoped might soon be published (62). He said this was work which every chemist of the country might undertake as chemistry in one form or another was pursued by the early colonists everywhere. President Smith made a warm plea upon the advantage of such historic studies and spoke of their importance in chemical education.

Professor B. B. Ross spoke next upon early chemists and chemical industries of the South. He spoke entertainingly upon the early sugar, turpentine, indigo, artificial ice, and other industries of the South; told of some early chemists such as Professor John Darby, and showed an alcohol Berzelius lamp which Professor Darby used, several scientific books which he wrote, and a bottle of

Prophylactic which he invented. The remarks of Professor Ross were listened to with great interest.

The final paper upon the program by Dr. Eugene A. Smith upon 'Some Early Southern Chemists and Their Work' was read in the absence of Dr. Smith by Professor Lloyd of the University of Alabama. It was now 6 o'clock and there being no further business the meeting adjourned. Everyone pronounced it one of the most interesting chemistry meetings which they had ever attended."

Birmingham Aftermath

At the banquet which followed at 7 P.M. the ACS Secretary, Dr. Charles Parsons, took some good-natured banter from different quarters, including Smith, who alluded to Parsons as our "great nitrate King." This came from the notoriety Parsons had acquired from newspaper accounts of his association with the Southern Nitrate Corporation. Smith had "applied this nickname to Dr. Parsons at the Council meeting, at the General meeting, and on other occasions, and when he sprang it again at the banquet Parsons manifested considerable displeasure. When he was later given the chance to defend himself, "Parsons proceeded to reproach President Smith for demoting him to the rank of a king. In the old days of his management of the office of Secretary of the Society he had been called a Czar and a Tyrant and now President Smith deliberately belittled him on every occasion with the common title of king."

A week after the Birmingham meeting Smith told Browne that the Section's meeting "was truly worthwhile" and asked if there would be anything in print from the session (63). Browne agreed that it was a "fine meeting" and ventured that "the side-line talks in the hotel lobby, the restaurants and in the excursions are in many ways the best part of these gatherings." Browne said he had submitted a brief write-up of the History Section to the *Journal of Industrial and Engineering Chemistry* (49) and was asked in return if any of the history papers might have a bearing on industrial chemistry. He thought Ross's paper on indigo was appropriate and that Ross had agreed to do it (64). Browne again followed Smith's train of thought, wondering "about the Journal of Historical Chemistry and wished some plan might be made to start such a publication (65)."

Editor Herty was very receptive to publishing HIST papers as Smith had earlier hoped. Two others from the session, one by Guyton (66) and the other by Browne (67), were subsequently published, an impressive four out of eleven papers given at the meeting.

Preparing for the Pittsburgh Meeting (Fall 1922)

In June Browne wrote to Smith that he had received an announcement from Charles Parsons that Smith had "reappointed me as Chairman of the Section." Browne continued, "I appreciate greatly the honor of the appointment and would proceed at once with Dr, Newell's help to solicit papers for our program except for the fact that I am so overcrowded with work at the laboratory (New York Sugar Trade Laboratory) this summer that it is very doubtful if I can do very much for the coming meeting or can even find it possible to attend. Mrs. Browne is also ill in the hospital and all my leisure time is spent with her. I think it would be better, therefore, under the circumstances, for someone else to be appointed chairman of the history section for the Pittsburgh meeting [which was only a few months away]. If I can attend the meeting I will do so and in case I find some time shall endeavor to prepare a paper (68)."

In Smith's reply he spent most of the letter expressing condolences and discussing gallstones. He did say that he would "get busy and write to some of our historical friends to see whether they will not be prepared with papers for the September meeting (69)." While the two continued corresponding through the rest of the summer to put together the Pittsburgh program, the subject of Browne's serving as chairman was never mentioned again.

Browne informed Smith in mid-July that Lyman Newell had suggested something on James C. Booth at the Pittsburgh meeting. Since Browne had recently visited J. E. Whitfield of "Booth, Garrett and Blair" in Philadelphia, he contacted Whitfield about giving a paper in Pittsburgh (70). Smith somewhat petulantly told Browne he had collected a lot of material on Booth and was going to be writing up his notes "in a day or two" but was going to contact Whitfield about his possible paper on Booth. "If he does not wish to do it, I can use my paper (71)." Smith was also contacting Frank Dains and Father Coyle, already HIST stalwarts, about presenting a paper, but obviously not giving them much time to prepare. A day later Smith wrote to express his frustration about dealing with Whitfield over the Booth matter and the refusal of a surviving daughter to meet with either of them (72). Browne, ever tactful, indicated he was happy to hear that Smith or Whitfield would talk about Booth (73). Browne noted how scarce information was about Booth and shared some information and sources with Smith. He then related an interesting story

told him by A. A. Breneman (74), whose laboratory was near Browne's on Water Street in New York (73):

> Dr. Booth was president of the American Chemical Society during the dark days of the eighties (75). The society had lost many members owing to the fact that the activities of the society were then too much localized in New York. Dr. Booth, although over 75 years old, made the trip to New York from Philadelphia to preside over the monthly meetings (unlike many of his predecessors). He usually came first to Breneman's laboratory where the chemists assembled. They would then go uptown to Siegortner's Restaurant in Lafayette Place for dinner and then walk across to Washington Square to the N. Y. University rooms for the meeting. I would give a great deal to have attended one of those meetings. I never saw Dr. Booth, but his picture hangs on my office wall.

Referring to a suggestion from Lyman Newell about HIST paying some attention to the history of metallurgy in America, Browne wrote to John A. Matthews, a metallurgist interested in history with an invitation to present at Pittsburgh. But Browne suggested caution to Smith, for "I think we ought to draw the industrial chemists into our section if possible, although I would not over-stress the industrial side (73)."

Figure 5. *Lyman C, Newell, Boston University, First Secretary of HIST. Edgar Fahs Smith Collection, University of Pennsylvania Libraries*

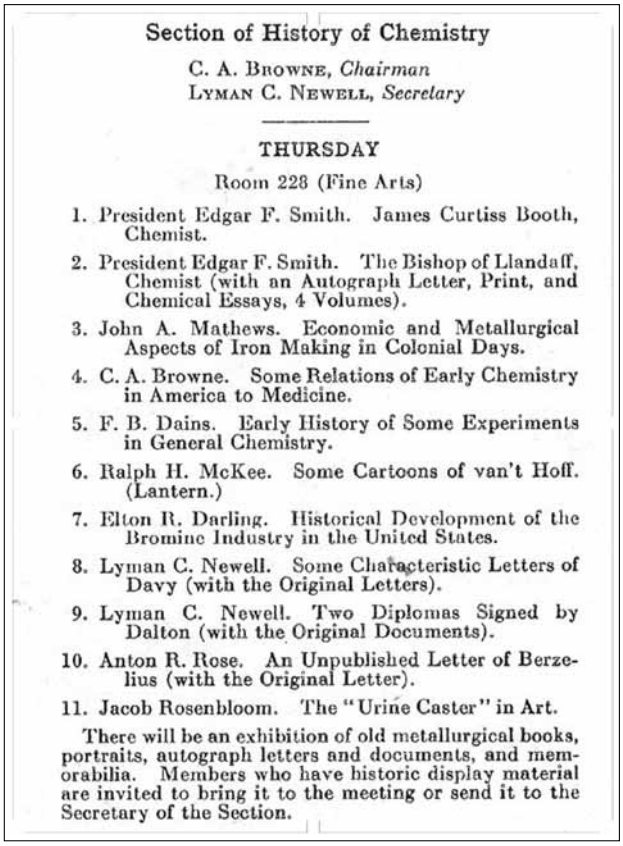
By the end of July Smith was optimistic "that it doesn't seem to me that there will be a dearth of papers. I imagine there will be some of the men from the south to talk to us. Each one of us can carry out to the meeting a book or some other historical object, so that the afternoon will be fully occupied (76)." Browne concurred, indicating that he had heard positively from several more speakers, and now that he had moved Mrs. Browne and their new daughter Caroline home from the hospital, "I shall have more leisure at evening" and promised a paper on the "Relations of early Chemistry in America to Medicine (77)." They were cutting it close: the Pittsburgh meeting was a little more than a month away.

The Pittsburgh Meeting (Fall 1922)

The 64th National Meeting of the ACS was held in Pittsburgh, PA, September 4–9, 1922, with general meetings held at the Carnegie Music Hall and the Divisional and Sectional Meetings at the Carnegie Institute of Technology. The meeting attracted more than 1,300 registrants with 453 papers given in 17 divisions and sections (78). (Among the highlights of the meeting was an all-day excursion to Donora, PA to view zinc roasting, the same process that killed 70 people in 1948 when an inversion layer trapped the smog from the smelters.)

It was stressed in an editorial in the *Journal of Industrial and Engineering Chemistry* that the "time has come when we must consider the desirability of establishing certain standards, for meeting papers, and make it something of an honor to be allowed to present a paper. Such a standardization will tend to reduce the number of papers presented, thus affording more time for discussion (79)." The ACS meeting stood in sharp contrast to European meetings, where each paper was followed by a "learned discussion…adding immensely to its interest and value (79)." Browne had lamented in his journal that he had no time for discussion at the Birmingham meeting.

As President of the Society, Smith gave his Presidential address at 9 P.M. on Wednesday evening, with an open invitation to the people of Pittsburgh to hear him talk about "Our Science." But it was Edwin E. Slossen, author of *Creative Chemistry*, whom Herty selected to reprint his address in the general session (80). Starting with noting that in 100 years chemistry had gone from being a toy to being a tool, Slosson proceeded to talk about "The Human Side of Chemistry." Just before the conclusion of his lengthy discourse Slosson remarked, "I am glad to see that you have already taken a step which will aid in the popularization of science by organizing a Section of the History of Chemistry." He



Section of History of Chemistry

C. A. Browne, *Chairman*
Lyman C. Newell, *Secretary*

THURSDAY

Room 228 (Fine Arts)

1. President Edgar F. Smith. James Curtiss Booth, Chemist.
2. President Edgar F. Smith. The Bishop of Llandaff, Chemist (with an Autograph Letter, Print, and Chemical Essays, 4 Volumes).
3. John A. Mathews. Economic and Metallurgical Aspects of Iron Making in Colonial Days.
4. C. A. Browne. Some Relations of Early Chemistry in America to Medicine.
5. F. B. Dains. Early History of Some Experiments in General Chemistry.
6. Ralph H. McKee. Some Cartoons of van't Hoff. (Lantern.)
7. Elton R. Darling. Historical Development of the Bromine Industry in the United States.
8. Lyman C. Newell. Some Characteristic Letters of Davy (with the Original Letters).
9. Lyman C. Newell. Two Diplomas Signed by Dalton (with the Original Documents).
10. Anton R. Rose. An Unpublished Letter of Berzelius (with the Original Letter).
11. Jacob Rosenbloom. The "Urine Caster" in Art.

There will be an exhibition of old metallurgical books, portraits, autograph letters and documents, and memorabilia. Members who have historic display material are invited to bring it to the meeting or send it to the Secretary of the Section.

Figure 6*. Program of the second meeting of the Section of History of Chemistry, Pittsburgh, PA, 1922. This is a photocopy of an original uncataloged program found in a closet at ACS headquarters by the author.*

also noted that in reducing science to a set of mathematical formulae and freeing it from all taint of time, place and personality, erratic history and "early gropings in the dark," one has eliminated the human element and thus eliminated the human interest.

HIST was again placed on the last day of the meeting and managed a full slate of eleven papers in spite of Browne's misgivings. In his journal entries for the meeting (81) Browne commented that on the opening day, Monday, September 4, "I met…Smith in the lobby of the…hotel [and] we retired to an obscure, quiet corner and had an hour's delightful chat upon our hobby, historical chemistry." They talked more about an historical journal which Smith was sure would happen with Browne as the editor. Browne demurred, claiming lack of "leisure time." The rest of the time was spent discussing the Spring 1923 National meeting at Yale, with Smith stressing the necessity of a strong HIST presence, especially because of Yale's chemical history and Benjamin Silliman's great influence on American chemistry.

On Thursday Browne and Smith took a cab to the Fine Arts Building, where "we went up to the third floor to our historical rooms and he placed his materials in the case with the other exhibits. He had a large mezzotint engraving of the Bishop of Llandaff, with an autograph letter of his and four volumes of his chemical essays (82). …. Professor Smith was much interested in our exhibit and thought that this feature should be continued at future meetings of the section (83). We talked over details of the exhibit and discussed historical chemistry until 9 o'clock, when the morning meetings began and Dr. Smith had to leave to conduct his educational section."

While secretary Newell provides a reasonably detailed account of the HIST session (Fig. 6) (84), it is again more instructive to see Browne's more personal account from his journal (81). "I called the meeting of the historical section to order at 2:05 P.M. President Smith spoke for 30 minutes upon the life and work of Dr. J. C. Booth (85) and for 15 minutes upon the life and work of the Bishop of Llandaff. After he finished he passed around a number of historical relics, among which was an old chemical manuscript recently discovered among some old papers in the library of the University of Pennsylvania. The manuscript seemed to be a source of lectures and contained many old chemical symbols, among which was that for phlogiston. It was probably written about 1780 or earlier.

"While President Smith was speaking, Dr. J. A. Mathews entered the room. I spoke with him for a minute. He said his paper was ready and he would speak next. He had not notified his local office that he was coming and they were, therefore, ignorant of his movements. Dr. Mathews spoke upon 'The Economic and Metallurgical Aspects of Iron Making in Colonial Days.' His address took 40 minutes and was warmly applauded. I expressed the hope that it would be printed in the Industrial Journal (86) .

"I followed with my paper upon 'Some Relations of Early Chemistry in America to Medicine,' which took 35 minutes. About 4 o'clock the room, which had been crowded with about 100 chemists with many standing outside, began to thin out. Some chemists had to catch trains, others wished to go to the afternoon lawn party and others to go to the lecture upon tomorrow's excursion. The excessive heat of the afternoon also caused many to leave. The next paper was a short 15-minute talk by Professor F. B. Dains upon the 'Early History of Some Experiments in General Chemistry.'

"At the end of Professor Dains' paper we moved our meeting to a room in the first floor which had just been vacated by the Educational Section, where there was a lantern. But before moving a gentleman from the University of Pittsburgh called our attention to a small exhibit of old books and documents which he had brought from the library.

"In our next meeting room Professor McKee showed us next some lantern views of some cartoons of Van 't Hoff which were greatly appreciated (87).

"Dr. Newell closed our program by showing us some interesting letters of Sir Humphry Davy and two diplomas signed by Dalton.

The other papers upon the list were presented briefly by abstract."

Pittsburgh Aftermath

"After finishing our program we held a short business meeting. Dr. C. L. Parsons, Secretary of the Society, thought the Educational and Historical Sections should hold joint meetings. I explained that this would mean the curtailment of the program as the Educational Section took usually four sessions to complete their work. Dr. Ellwood Hendrick was opposed to joint meetings and hoped the history section would continue as a separate organization. President Smith, Professor Coates, Dr, Newell, and others spoke to the same purpose. It was finally voted to meet as a separate section at the next New Haven meeting and our meeting adjourned at 5 o'clock (81)." The officers of the Section were reappointed and were already making arrangements for the New Haven meeting (84).

Newell's account (84) indicates all but one paper were given and omitted mention only of the last paper by Jacob Rosenbloom. But according to Browne, three papers by Darling, Rose, and Rosenbloom were read by abstract only (89). Browne seems to have had better control of the session than he did in Birmingham but still had to cut several papers (88). Yet by all accounts the meeting can be considered quite successful. It drew another large audience of more than 100 people in spite of the heat and a very poor place on the schedule. And it fended off an attempt to merge it with CHED by the powerful secretary of the society, which would have effectively put an end to HIST before it could ever mature (90).

As Herty remarked, "We all came away from the Pittsburgh Meeting impressed with the fact that the chemical profession is looking up, and confident that the American Chemical Society is able to undertake and carry through whatever is worthwhile for chemists and chemistry (79)." The officers of HIST, Charles A. Browne and Lyman C. Newell, under the watchful eye of Edgar Fahs Smith, enthusiastically said they were already preparing for the next meeting in New Haven.

HIST Meeting Number	ACS Meeting Number	Location	Date	Papers	Attendance	Comments
1	60	Chicago IL	6–10 Sept 1920	0	2	Informal meeting between Smith and Browne at Northwestern
2	61	Rochester NY	25–29 April 1921	16	20–50	"An informal section on the history of chemistry"
3	62	New York, NY	6–10 Sept 1921	10	>100	A "symposium" on the history of chemistry following the program of the Section of Chemical Education
4	63	Birmingham AL	3–7 April 1922	11	>100	First HIST meeting as a duly recognized Section of the History of Chemistry of the ACS
5	64	Pittsburgh PA	4–8 Sept 1022	11	>100	First use of lantern slides at a HIST meeting

Figure 7. Summary of the first three years of HIST Activity.

REFERENCES AND NOTES

1. Presented in part at the 198th national meeting of the American Chemical Society, Miami Beach, FL, September 1989, HIST 11.
2. For the previous paper in this series see J. J. Bohning, "Looking Back: Eighty-Five Years of Chemists and Their History," *Bull. Hist. Chem.,* **2007,** *32*, 66–81. This paper contains the details of the founding of HIST as well as a concise summary of HIST activities over the ensuing years.
3. See J. J. Bohning, "The Continental Chemical Society," *Bull. Hist. Chem.*, **1990**, *No. 6*, 15–21 for the compromise that saved the American Chemical Society from the formation of a rival organization and led to the concept of national meetings held outside New York City. See also J. J. Bohning, "Fighting City Hall: The Role of Washington Chemists in the Nationalization of the American Chemical Society," 220th national meeting of the American Chemical Society, Washington, DC, August 2000, HIST 06.
4. J. J. Bohning, "A Center of Crystallization in a Molecular Mélange: The 1893 World's Congress of Chemists," *Bull. Hist. Chem.,* **1989**, *No. 3*, 16–21.
5. See C. A. Browne and M. E. Weeks, "A History of the American Chemical Society: Seventy-Five Eventful Years," American Chemical Society, Washington DC, 1952, Ch. VI, 68ff and references therein.
6. A detailed account of this meeting with abstracts of many of the papers appears in *Science*, **1905**, *21*, 252–263.
7. See Ref. 5, Chapter VII, pp 81ff, for details of the first formation of ACS Divisions.
8. See Ref. 5, Ch. XVII, pp 264–265.
9. Browne's papers are at the Library of Congress, LC Control No. mm 78014134. The 36,000 items are only loosely catalogued. In his correspondence with Smith, Browne kept Smith's original plus a carbon of his reply, thus providing a reasonably complete picture of their exchange. All quotations of the Smith-Browne correspondence are taken from letters found in this collection. Smith's papers are at the University of Pennsylvania (see http://ead.library.upenn.edu/cgi/f/findaid/findaid-dx?type=simple;c=findaid;view=text;subview=fulltext;q1=annenberg%20rare%20book;id=PAURMsColl112, accessed 22 June 2010).
10. Smith to Browne, July 22, 1921 (9).
11. Smith to Browne, May 28, 1921 (9).
12. Browne to Smith, July 27, 1921 (9). It is unclear what "announcement" Browne is referring to.
13. The British Society of Chemical Industry was meeting first at McGill University before traveling to New York to have a joint meeting with the ACS.
14. Smith to Browne, August 6, 1921 (9).
15. Browne to Smith, August 9, 1921 (9).
16. Smith to Browne, August 10, 1921 (9).
17. Smith to Browne, August 19, 1921 (9).
18. Browne to Smith, August 22, 1921 (9).
19. Smith to Browne, August 23, 1921 (9).
20. E. F. Smith, *Chemistry in America*, D. Appleton & Co., Philadelphia, PA, 1914.
21. Browne to Smith, August 24, 1921 (9).
22. In the 1920s ACS meeting news was scattered in three publications: *Proceedings of the American Chemical Society*, *Journal of Industrial and Engineering Chemistry*, and *Science*. Smith's address on "The Progress of Chemistry" does not appear in any of them, although it was published as a separate offprint. A copy is available in the Lehigh library, Call Number SC Trx 2830AJ. Smith did mention Browne's work as promised.
23. Herty was the editor of the *Journal of Industrial and Engineering Chemistry*.
24. See "Program of Papers," *J. Ind. Eng. Chem.*, **1921,** *13*, 951–955 and "Reports of Meetings of Divisions and Sections," *J. Ind. Eng. Chem.*, **1921**, *13*, 956–960. For additional information about the meeting, see *J. Ind. Eng. Chem.*, **1921**, *13*, 667, 733–737, 750, 752, 844–848, 862–892.
25. A copy of the original is in the HIST archives at the Chemical Heritage Foundation.
26. For the events leading up to the formation of the Division of Chemical Education, see J. J. Bohning, "Crystallizing Classroom Chemists: From Isolated Disorder to Organized Interaction in the Teaching of Chemistry. A History of the Effort To Create a National Chemical Education Organization," *J. Chem. Educ.*, **2003**, *80*, 642–650.
27. J. C. Olsen, "The Meeting of the Section of Chemical Education," *J. Ind. Eng. Chem.*, **1921**, *13*, 1074–1076. A summary of the HIST session is given on p 1076.
28. L. C. Newell, "Historical Sketch of the Division of the History of Chemistry, American Chemical Society," *J. Chem. Educ.*, **1932**, *9*, 667–669.
29. Smith to Browne, September 14, 1921 (9).
30. Smith to Browne, September 21, 1921 (9).
31. Smith to Browne, September 16, 1921 (9).
32. Browne and Smith would continue to struggle with a mechanism for publishing historical chemistry for some time. For more details on the concept of a journal for the history of chemistry, see Ref. 2, pp 73-75.
33. Browne to Smith, October 21, 1921 (9).
34. Browne sent copies to Smith on November 2, 1921. Some of these pictures are also in the archives at The Pennsylvania State University. An article indicating the seven historic photographs were available for individual purchase appeared in *J. Ind. Eng. Chem.*, **1923**, *15*, 90–91. Three of these pictures were printed in Charles A. Browne, Ed., *A Half Century of Chemistry in America, 1876–1926*, as printed in a special issue of *J. Am. Chem. Soc.*, **1926**, *48*, 4,6,8.
35. Browne to Smith, November 2, 1921 (9).
36. Browne to Smith, November 10, 1921 (9).
37. Although Browne and Smith often use the term "Historical Chemistry," the official ACS name was "Section of the History of Chemistry."
38. Browne to Smith, February 25, 1922 (9).

39. Lyman Churchill Newell was a professor of organic chemistry at Boston University. Secretary of the Section, he was most likely appointed—not elected—by Parsons, as was Browne. For more on Newell, see W. D. Miles and R. F. Gould, *American Chemists and Chemical Engineers*, Gould Books, Guilford, CT, 1994, Vol. 2, 197 and references therein.
40. At least partly because of Browne's action, this concept of a regional chemical history based on the location of the national meeting would be a recurring theme for many HIST programs in the future.
41. Cooper was professor of chemistry and later president of the University of South Carolina in Columbia.
42. Smith to Browne, February 27, 1922 (9).
43. C. A. Browne, "Reminiscences of Professor Edgar Fahs Smith," original typescript in the Edgar Fahs Smith Collection, University of Pennsylvania Library, call number 540.92 Sm52B, 22–23,
44. The complete text of Smith's talk, "Samuel Latham Mitchell—A Father in American Chemistry," is in *J. Ind. Eng. Chem.*, **1922**, *14*, 556–559.
45. Smith was the sixth recipient of the Chandler Medal, which is still given by the Chemistry Department of Columbia University.
46. Details of the Birmingham meeting may be found in *J. Ind. Eng. Chem.*, **1922**, *14*, 83, 175, 238, 357–359, 449–460, and *Science*, **1922**, *56*, 21–30, 50–58. The printed 4 x 7.5 pocket-size program shows, however, that the meeting sessions were held at the Tutwiler Hotel and the Southern Club, contrary to the *Journal's* advance comments a month before the meeting about the Methodist church. Yet Browne's journal indicates the use of the Methodist church for the sessions (Ref. 45, p 28).
47. *J. Ind. Eng. Chem.*, **1922**, *14*, 450. The other probationary sections were Cellulose Chemistry, Chemical Education, and Petroleum Chemistry.
48. A searchable data base is being constructed that will contain every paper (and every symposium title) ever presented at a HIST Session, including the preliminary meetings at Rochester and New York in 1921. This is not a small undertaking and is being expanded as the various papers in this series on the history of HIST are written. There are currently 153 entries through 1927.
49. Browne's summary of the meeting is in *J. Ind. Eng. Chem.*, **1922**, *14*, 455, from which these quotes are taken. Although not on the program, Browne mentions that after McKee's presentation "a letter from S. P. Sharples was read describing the Centennial Meeting which resulted afterwards in the formation of the American Chemical Society." This is not an accurate statement, as shown in J. J. Bohning, "Opposition to the Formation of the American Chemical Society," *Bull. Hist. Chem.*, **2001**, *26*, 92–103 and **2002**, *27*, 46–47.
50. At this time abstracts of papers presented at ACS national meetings appeared in *Science*. Of all the speakers, only John A. Gunton submitted an abstract. See *Science*, **1922**, *56*, 52–53.
51. The full exchange between Browne and Smith on this matter is in C. A. Browne, "The Past and Future of the History of Chemistry Division," *J. Chem. Educ.*, **1937**, *14*, 461.
52. The relationship of Browne and Smith and HIST to the Priestley House is an interesting story, which would require a complete separate paper.
53. Crane was the editor of *Chemical Abstracts*. Crane and Austin M. Patterson published the first edition of *A Guide to the Literature of Chemistry* in 1927 (John Wiley and Sons, New York). Appendix 8, 353–411 is a select list of chemical books.
54. T. Ewell, *Plain Discourses on the Laws or Properties of Matter; Containing the Elements or Principles of Modern Chemistry*, Brisban and Brannan, New York, 1806. It did not appear in Crane and Patterson's list (Ref. 53).
55. The exchange is too lengthy to reproduce here but is interesting reading. See Ref. 45, pp 25–28. See also W. McPherson, "Some Experiences of Dr. Edgar Fahs Smith as a Student Under Wöhler," *J. Chem. Educ.*, **1928**, *5*, 1553–1557, based on a lengthy informal conversation between Smith and some HIST members in a hotel lobby at the ACS meeting in St. Louis in 1928.
56. The CHED session started at 9:30, and Swan was listed as the second speaker with the topic "Some Laboratory Helpers." It is assumed he replaced this with his HIST paper, "A Book and a Battery." In doing so, however, Swan deprived the 100 people at the HIST session from hearing his paper.
57. This equipment is still preserved in the Millington-Barnard Collection of Scientific Instruments in the University Museum at the University of Mississippi. Millington was hired in 1848, partly because of his equipment collection that could be used for instructional purposes. Most of the scientific apparatus was hidden from marauding Union forces during the Civil War and put back to use after the University reopened (Private Communication, University of Mississippi Museum). See http://www.olemiss.edu/depts/u_museum/Millington/index.htm (accessed June 25, 2010).
58. R. T. Gunther, *Early Science at Oxford*, Oxford University Press, London, 1920.
59. E. O. von Lippmann, *Zeittafeln Geschichte der organischen Chemie (Chronological Tables of the History of Organic Chemistry)*, Julius Springer, Berlin, 1921.
60. According to the official published program, Browne was scheduled to follow Smith with a paper on "Some Early References Pertaining to Chemical Warfare," but he makes no mention of it in his reports (49, 50). Browne admits that he did not have time for discussion after the papers (50), presumably because Smith rambled on for over an hour. (There are no starting times for the papers on the official program.) Trying to keep to some semblance of a schedule after Smith, Browne read his paper "by title" and moved on to the next paper by Coyle. The unread paper was quickly published in the July issue of

J. Ind. Eng. Chem., **1922**, *14*, 646. It was the first paper presented before HIST that was published.

61. A. Kircher, *Magnes sive, De arte magnetica opus tripartitum***,** Coloniae Agrippinae, Apud Jodocum Kalcoven, 1643.
62. Browne published two papers on alchemy in America, but neither is related to his presentation in New York. Instead, they were given at later HIST meetings in Baltimore (1925) and Milwaukee (1938).
63. Smith to Browne, April 15, 1922 (9).
64. B. B. Ross, "Some Early Notes on the Early Indigo Industry in the South," *J. Ind. Eng. Chem.*, **1922**, *14*, 1153–1154.
65. Browne to Smith, April 17, 1922 (9).
66. J, A, Gunton, "An Early type of Chemical Slide Rule," *J. Ind. Eng. Chem.*, **1923**, *15*, 747.
67. C. A. Browne, "Early Chemical Industry in America—A Few Comparisons of Past and Present Conditions," *J. Ind. Eng. Chem.*, 1**922**, *14*, 1066–1071.
68. Browne to Smith, June 21, 1922 (9).
69. Smith to Browne, July 13, 1922 (9).
70. Browne to Smith, July 15, 1922 (9),
71. Smith to Browne, July 17, 1922 (9).
72. Smith to Browne, July 18, 1922 (9).
73. Browne to Smith, July 19, 1922 (9).
74. Breneman was a consulting chemist with laboratories doing chemical analyses for profit. He had attended the meeting at the Priestley House in 1874 and was an editor of *J. Am. Chem. Soc.*, 1884–1893.
75. James Curtis Booth was president of the ACS in 1883, 1884, and 1885. He shared a common bond with Edgar Fahs Smith, who was the only other three-term president in 1895, 1921, and 1922.
76. Smith to Browne, July 21, 1922 (9).
77. Browne to Smith, July 25, 1922 (9).
78. Details of the Pittsburgh meeting may be found in *J. Ind. Eng. Chem.*, **1922**, *14*, 652–653, 742–743, 883, 885–893, 978–982 and *Science*, **1922**, *56*, 219, 138–140, 393–400.
79. Ref. 78, p 883.
80. Ref. 78, pp 887–893.
81. Ref. 45, pp 7–41.
82. R. Watson [the Bishop of Llandaff], *Chemical Essays*, London, Printed for J. Dodsley, et. al., 1782–1783, 4v, 2nd. ed., for example. There are multiple editions of this work, all of which are in the Smith Collection at the University of Pennsylvania, so it is impossible to tell which four volumes Smith brought with him to the meeting.
83. The practice of exhibits at HIST meetings continued for some time, then occurred very infrequently. Recent efforts to revive the exhibit concept have been unsuccessful.
84. Ref. 78, p 981.
85. Newell gives great detail of the contents of Smith's talk in Ref. 84.
86. There is no evidence this paper was published,
87. R. H. McKee, "Some Cartoons of van 't Hoff," *J. Ind. Eng. Chem.*, **1923,** *15*, 192–193.
88. No HIST abstracts were apparently published.
89. In these earlier ACS days programs were not nearly as rigorously scheduled as they currently are. No times were scheduled, and it was up to the chairman to keep things in order.
90. CHED and HIST have for the most part maintained a close relationship, in part because of the use of the history of chemistry in the teaching of chemistry (2). Joint sessions would indeed be held in the future, but HIST has always maintained its own identity.

ABOUT THE AUTHOR

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