
# Reed and Hyde Families Papers.

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Version 3
August 20, 2018

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| CLASS OF SERVICE DESIR | | | |
|---|---|---|---|
| DOMESTIC | | CABLE | |
| TELEGRAM | ✓ | ORDINARY | |
| DAY LETTER | | URGENT RATE | |
| SERIAL | | DEFERRED | |
| NIGHT LETTER | | NIGHT LETTER | |

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

# STERN UNION

A. N. WILLIAMS
PRESIDENT

1206

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| CHECK |
|---|
| ACCOUNTING INFORMATION |
| TIME FILED |

*Send the following telegram, subject to the terms on back hereof, which are hereby agreed to*

FOR VICTORY
BUY
WAR BONDS
TODAY

4/2/46

MRS. ARTHUR S. DWIGHT
JUPITER ISLAND
HOBE SOUND FLORIDA

WE ARE DEEPLY GRIEVED TO HEAR OF UNCLE ARTHUR'S DEATH.

ARTHUR WILL BE IN NEW YORK THIS WEEK AND WILL SEE YOU IF YOU ARE

THERE. OUR SYMPATHY AND LOVE GO TO YOU AT THIS TIME

JOSEPHINE AND ARTHUR

JB

DUPLICATE FOR TELEGRAPH DEPT.

# ALL MESSAGES TAKEN BY THIS COMPANY ARE S[redacted]ING TERMS:

To guard against mistakes or delays, the sender of a message should order it repeated, that is, te[redacted]omparison. For this, one-half the unrepeated message rate is charged in addition. Unless otherwise indicated on its face, this is an unrepea[redacted]deration whereof it is agreed between the sender of the message and this Company as follows:

1. The Company shall not be liable for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the unrepeated-message rate beyond the sum of five hundred dollars; nor for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the repeated-message rate beyond the sum of five thousand dollars, unless specially valued; nor in any case for delays arising from unavoidable interruption in the working of its lines.

2. In any event the Company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the actual loss, not exceeding in any event the sum of five thousand dollars, at which amount the sender of each message represents that the message is valued, unless a greater value is stated in writing by the sender thereof at the time the message is tendered for transmission, and unless the repeated-message rate is paid or agreed to be paid, and an additional charge equal to one-tenth of one per cent of the amount by which such valuation shall exceed five thousand dollars.

3. The Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.

4. Except as otherwise indicated in connection with the listing of individual places in the filed tariffs of the Company, the amount paid for the transmission of a domestic telegram or an incoming cable or radio message covers its delivery within the following limits: In cities or towns of 5,000 or more inhabitants where the Company has an office which, as shown by the filed tariffs of the Company, is not operated through the agency of a railroad company, within two miles of any open main or branch office of the Company; in cities or towns of 5,000 or more inhabitants where, as shown by the filed tariffs of the Company, the telegraph service is performed through the agency of a railroad company, within one mile of the telegraph office; in cities or towns of less than 5,000 inhabitants in which an office of the Company is located, within one-half mile of the telegraph office. Beyond the limits above specified the Company does not undertake to make delivery, but will endeavor to arrange for delivery as the agent of the sender, with the understanding that the sender authorizes the collection of any additional charge from the addressee and agrees to pay such additional charge if it is not collected from the addressee. There will be no additional charge for deliveries made by telephone within the corporate limits of any city or town in which an office of the Company is located.

5. No responsibility attaches to this Company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the Company's messengers, he acts for that purpose as the agent of the sender.

6. The Company will not be liable for damages or statutory penalties in the case of any message except an intrastate message in Texas where the claim is not presented in writing to the Company within sixty days after the message is filed with the Company for transmission, and in the case of an intrastate message in Texas the Company will not be liable for damages or statutory penalties where the claim is not presented in writing to the Company within ninety-five days after the cause of action, if any, shall have accrued; provided, however, that neither of these conditions shall apply to claims for damages or overcharges within the purview of Section 415 of the Communications Act of 1934.

7. It is agreed that in any action by the Company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.

8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.

9. No employee of the Company is authorized to vary the foregoing.

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## CLASSES OF SERVICE

### DOMESTIC SERVICES

**TELEGRAMS**

A full-rate expedited service.

**DAY LETTERS**

A deferred service at lower than the standard telegram rates.

**SERIALS**

Messages sent in sections during the same day.

**NIGHT LETTERS**

Accepted up to 2 A.M. for delivery not earlier than the following morning at rates substantially lower than the standard telegram or day letter rates.

### CABLE SERVICES

**ORDINARIES**

The standard service, at full rates. Co[redacted] messages, consisting of 5-letter groups only, at a lower rate.

**DEFERREDS**

Plain-language messages, subject to being deferred in favor of full-rate messages.

**NIGHT LETTERS**

Overnight plain-language messages.

**URGENTS**

Messages taking precedence over all other messages except government messages.

## ARTHUR SMITH DWIGHT.

When warriors bold return from war and fields of carnage, from massacres and deeds of blood and daring, how much more satisfactory it is to all concerned, and particularly to the object of adulation and gratulation, that he returns not upon his soldiers' spears, not as a dead, mussed-up corpse, but as a particularly live and robust one, with unwhispered request that tears and other paraphernalia be reserved for future occasion. And how our manly "buzzums" swell with pride when we think of the heroic fiber of a little band of our countrymen who held themselves true to their traditions of heroism amidst the encircling menace of angry hordes of Mexico's swarthy sons on that day when the peace of Cananea disappeared before the fires of revolution flaming against the Eagles of Ixitlit. And our pride increases when we behold in one of our number a leader in those strenuous times. Dwight, Salud!

Arthur Smith Dwight was born at Taunton, Mass., on March 18, 1864, and on June 4, 1895, he was married to Jane Earl Reed, of Joliet, Ill. He was graduated with the Class of '85 with the degree of Engineer of Mines, having previously received a diploma without degree from the Brooklyn Polytechnic, in 1882.

From 1885 to 1896 he was in the service of the Colorado Smelting Co., Pueblo, Colo., being Superintendent of the company from 1889 to 1896, inclusive. From December, 1896, to 1899, he was the General Superintendent of the Consolidated Kansas City Smelting and Refining Co.; to March, 1900, Member of the Operating Committee of the American Smelting and Refining Co., at Denver, Colo.; to April, 1903, Assistant to the President of the Campania Metalurgica Mexicana, managing the smelting plant at San Luis Potosi, Mexico. From June 1, 1903, to March, 1904, he was Assistant to the President and Consulting Engineer of the Greene Consolidated Copper Co., Cananea, Sonora, Mexico. From March, 1904, to July, 1906, he was the General Manager of the same company. From August, 1906, to date he has been in private practice as Consulting Engineer, in connection with general mining and metallurgical work. He is Vice-President of the Candelaria Mining Co., operating at San Pedro, Chihuahua, Mexico, and President of the Dwight & Lloyd Metallurgical Co., owning and developing some important metallurgical patents of his own.

He is a Life Member of the American Institute of Mining Engineers, a member of the Institution of Mining and Metallurgy (London), and of the American Electrochemical Society. He is a member of the Engineers' Club and of the Rocky Mountain Club, New York; of the Denver Club, Denver, Colo.; Vice-President in 1910 and President in 1911 of the Alumni Association of the Schools of Science of Columbia University, etc.

His height is 6 ft. ½ in., and his present weight 153 lb. His hirsute adornments consist of gray hair ("plenty of it") and an excuse for a moustache. His address is 25 Broad St., New York City.





## ARTHUR S. DWIGHT

## DWIGHT.

Hail, Dwight! We ken your works of might, recount your daring deeds,
We see you treading Duty's path wherevermore it leads;
  We know the Industries you've run and made their pulses quicken,
  The Smelters that you've managed oft, without Directors kickin';
The Mines that you have handled as the stocks they quickly riz
(Stockholders lafin' fit ter kill when you got down ter biz);
  We see you slayin' Mexic's sons with seven-foot machetes,
  (You've shed your blood in pints, b'gosh! when fit by Western skeeters),
In fact you done hull lots o' things an' fit an' bled an' died,
Then settled down ter work ter git the other fellow's hide;
  But never thought we you'd evolve ('tis sad the tale to tell!)
  A true de luxe edition of the real old brimstone hell.
Inventin' roastin' furnaces for sulph'rous fires an' blazes,
You've made the Old Boy sit him up—your furnace him amazes;
  But whether breathin' brimstone fumes or balmy airs caressin',
  We wish you joy and wealth, friend Dwight. Good Luck! an' here's our blessin'.

# The Presidents of the Four National Engineering Societies

## Arthur Smith Dwight

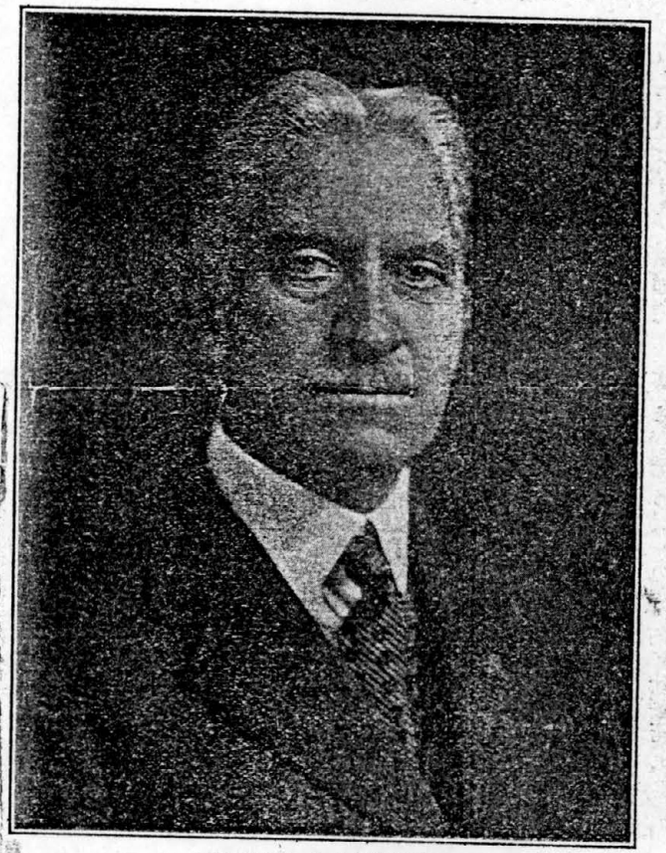
ARTHUR SMITH DWIGHT, president of the American Institute of Mining and Metallurgical Engineers, was born in Taunton, Mass., on March 18, 1864. He is descended on both sides from early settlers, one of whom was Richard Warren, of the "Mayflower." His forebears included Col. Benjamin Church, Timothy Dwight, and the Rev. Jonathan Edwards, third president of Princeton College.

Mr. Dwight was graduated in 1882 from the Polytechnic Institute of Brooklyn, N. Y., and three years later from the Columbia School of Mines, with the degree of Engineer of Mines. In 1914, he received the honorary degree of Master of Science from Columbia.

On leaving Columbia in 1885, he went to Pueblo, Col., and for thirteen years was associated with the Colorado Smelting Co. Beginning as assayer he rose to be general superintendent. When he gave up the latter position he became connected with several large companies in the mining and smelting of lead, copper and the precious metals in the Rocky Mountain region. This work occupied him from 1897 to 1906, and six years of that time were spent in Mexico. He was general manager of the Greene Consolidated Copper Company at Cananea, Mexico, in 1906, when trouble first developed against the régime of Diaz. A general uprising was planned to seize the mines, and with money and supplies so obtained, carry the revolt through the interior. Mr. Dwight turned his industrial organization into a military unit almost over night, stemmed the tide of revolution, and had the situation well in hand before the arrival of troops.

In the fall of 1906 he returned to New York and began practice as a consulting mining and metallurgical engineer. He next developed important metallurgical patents for the roasting and agglomeration of fine ores, known as the Dwight and Lloyd sintering process, now extensively used all over the world.

When the World War began Mr. Dwight became convinced that the United States must eventually enter the fight and he took an active part in preparedness work, particularly in his own profession. He was a member of an engineering committee that coöperated with the War Department in obtaining the creation of the Engineer Officers Reserve Corps, which resulted in a large number of engineers being available when we declared hostilities. Mr. Dwight was one of the first civilians to be commissioned in the Reserve and to enter active service. As Major in the First Reserve Engineer Regiment, he had an important part in recruiting and training that body, which sailed for France on July 14, 1917, as the Eleventh Engineers. This was the first unit of the A. E. F. in action. The behavior of these engineers at Cambrai on Nov. 30, 1917, when they fought the Germans with pick and shovel, thrilled all America.



ARTHUR S. DWIGHT

Major Dwight served in France for more than twenty-two months, nine months of which was spent on the British front. At the request of the French Government he was assigned as special metallurgical advisor to French companies engaged in war work. He was next appointed Engineer Salvage Officer, A. E. F. to organize a reclamation service for the great quantities of war material being wasted on the battlefields. After the armistice he returned home and was discharged in May, 1919. He now bears the rank of Lieutenant-Colonel of Engineers, U. S. Reserve. He received

the D. S. O. from the British and a citation by General Pershing.

Besides being a life member of the American Institute of Mining and Metallurgical Engineers, he is vice-president of the New York Post, Society of Military Engineers; member of the Executive Board, American Engineering Council; member of the Mining and Metallurgical Society of America; honorary member, Institution of Mining and Metallurgy, London; Military Order of the World War; Engineers, University, and Columbia University Clubs, New York and the Engineers' Country Club.

In 1895, Mr. Dwight was married to Miss Jane Earl Reed, daughter of the late Samuel B. Reed, of Joliet, Ill., who built the Union Pacific Railroad. She accompanied him throughout his pioneering days and after his departure for France succeeded in following, undertaking relief work with the French Red Cross. In January, 1918, she became Regional Directress of the women workers with the Y. M. C. A. at the American front. She was decorated by the French Government with the Croix de Guerre for bravery and also received other citations.

Mr. Dwight has written extensively on engineering subjects and has been an occasional lecturer at Columbia, of which he is a trustee. He is president of the Dwight & Lloyd Sintering Co. and the Dwight & Lloyd Metallurgical Co.

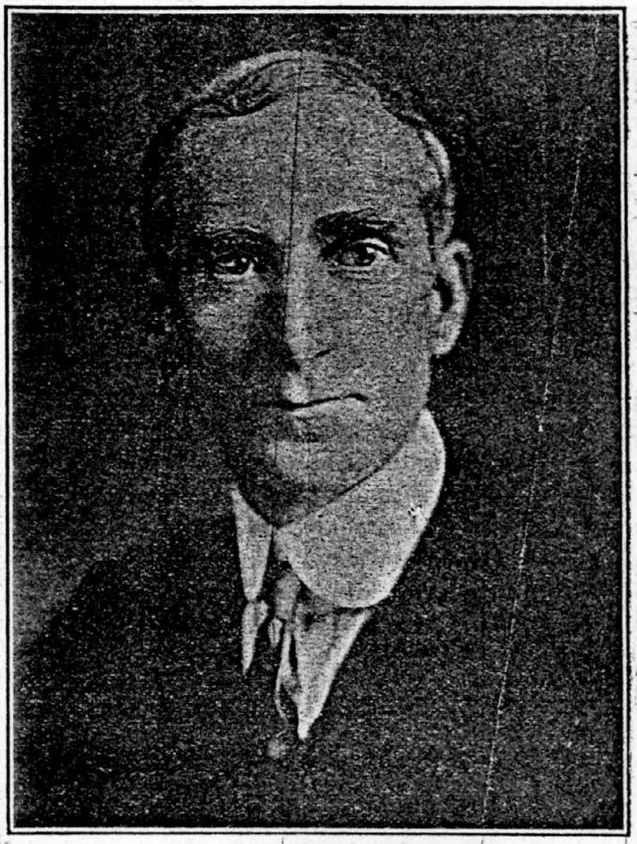
## Dexter S. Kimball

DEXTER S. KIMBALL is the president of the American Society of Mechanical Engineers, elected at the annual meeting in December. Born in New River, New Brunswick, Canada, in 1865, he was educated in California, at Leland Stanford Jr. University. He received the degree of A. B. in 1896, and of M. E. in 1913.

He served his apprenticeship with Pope & Talbot, Port Gamble, Wash., and in the shops and the engineering department of the Union Iron Works, San Francisco. In 1898 he became designing engineer for the Anaconda Mining Co. For three years he served as assistant professor of machine design at Sibley College, Cornell University, then became works manager of the Stanley Electric Manufacturing Co., Pittsfield, Mass. In 1904 he returned to Cornell University as professor of machine design and construction, and since 1915 has occupied the chair of industrial engineering. He became dean of the College of Engineering in 1920.

Dean Kimball is also a member of the Society for the Promotion of Engineering Education, the Society of Industrial Engineers, and of the honorary societies Sigma Xi and Tau Beta Pi, and since 1911, has been a member of the Council on Industrial Engineering of the New York State Department of Education. He is vice-president of The Federated American Engineering Societies.

He is co-author with John H. Barr of "Elements of Machine Design" and is author of "Industrial Education," "Principles of Industrial Organization," "Elements of Cost Finding," and "Plant Management," as well as of many contributions to the technical press.



DEXTER S. KIMBALL

## John Ripley Freeman

JOHN RIPLEY FREEMAN, of Providence, R. I., was elected president of the American Society of Civil Engineers on Jan. 18, 1922. Mr. Freeman received the B. S. degree from Massachusetts Institute of Technology in 1876; an honorary Sc. D. from Brown University in 1904, and from Tufts College in 1905.

For 10 years, 1876-86, Mr. Freeman was principal assistant engineer for the Water Power Co. at Lawrence, Mass., and for eight of those years was also assistant to Hiram F. Mills, consulting engineer. He was Water Commissioner in Winchester, Mass., for four years; chief engineer of the investigations for the Charles River Dam, in 1903; he planned the water-power developments on Feather River, Cal., at Long Sault on the St. Lawrence in 1904 and at the Lachine Rapids in 1914.

He has been consulting engineer on many large water-supply and water-development projects, and has made extensive studies on safeguarding life in theaters, and on sanitary and drainage problems. He was consulting engineer on the Isthmian Canal locks and

ROBERT W. ROWEN
PONTIAC STREET
P. O. BOX 136
BROMONT, QUEBEC, CANADA JOE-ILO
PHONE: 514-534-2219

January 19, 1983

Mr. Arthur D. Hyde, Mrs. Jerry Wm. Brown, Mrs. John D. Watkins

Dear Art:-

I am sending copy of this letter Only to Mina & Jean.

Encloser are the only copies of the following and I would like to have them back when you are finished. No hurry.

1)-- Arthur S. Dwight will, Jan. 15, 1946. You undoubtedly have a copy, but I realized that it has referamae to a number of Cousins etc. which may help Mina to tie in the Dwights, Chapins, Howards

2)--Rossiter W. Raymond, Memoir. Uncle Arthur grew up with the Raymonds in Brooklyn and Uncle Ross & Aunt Susie were frequent visitors to Great Neck in 1914-1916. She was the daughter of Milliam & Mary Dwight, of Brooklyn. (See bottom of page 8 )

3)--Letter to Irene & me Feb. 21, 1929 re Aunt Jane's death and fujeral which you attended.

4)--His letter of Feb. 2, 1930 telling us of his plan to marry Anne Howard Chapin. It has references to the Merriams, Cousin Susie Howard and Cousin Annie Howard Chapin-Dwight. Also Aunt Annie's children.

5)--Another N.Y.Times article Feb. 13, 1929 showing Aunt Jane Dwight being decorated.

Barbara Chapin Hamby, Uncle Arthur's favorite daughter-in law-who lived across Dwight Lane from us- now lives at 140 East 38th Street, N.Y.Cits 10016. Phone 212-684-8092. Her sister, Connie Chapin de la Osa (who is now dead) had a daughter Elana Kingslan 505 East 79th Street, N.Y.City 10021 Phone 212-744-1743. I saw Elana at Louise & Hugh's anniversary in New London June 12, 1982.

Elana has most of the pictures, letters etc on the Dwight side which Barbara turned over to her when Aunt Annie Dwight died. Elana is interested in gehealogy abd offered to let us have anyiting of interest. I phoned Elana and said Trudy & I would see her in N.Y. next time we got there. Probably late February. I'm enclosing copy of letter I am writing her-and I'm sending Mina a copy of my letter- to see if she will get the data together until I see her.

I am sending Elana Kingsland the only Packet I have And would like to have twelve more.

We are leaving for Florida Jan. 25th, returning Feb. 8th Expect to buy a house in Lakeland. Will let you know.

cc Mina & Jean.

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Burn

# Rossiter W. Raymond

A Memoir

By W. R. INGALLS

Reprinted from
*Engineering & Mining Journal*
January 18, 1919

Reprinted from Engineering and Mining Journal, January 18, 1919

# Rossiter W. Raymond

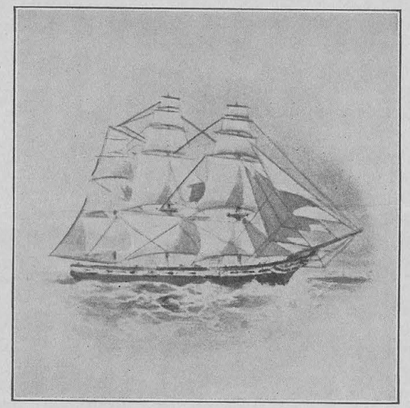
A MEMOIR BY W. R. INGALLS

AS LONG as 35 years ago Raymond was already a legendary character. There were not many mining engineers in this country at that time, and most of them were young men who had been graduated after the Centennial. There was a small number of men who had been schooled at Freiberg in the '60s. These were the revered seniors of the new profession, and among them Raymond was preëminent. His merits were distinguished. He had had a picturesque career. He had filled several public positions that had caused attention to be focused upon him. Long before that time he had become the most conspicuous among mining engineers. His colleagues admired him. The young fellows looked up to him as one standing on the heights. As one of those young fellows, I first met him at Leadville, in June, 1889, which was visited by the Institute in the course of its 54th meeting. The honor of an introduction to this famous man overwhelmed me, and I well remember the awe that I felt in entering his private car. It seems to me that during our subsequent acquaintance, and later friendship, of nearly 30 years, he never changed greatly in appearance from that day. He never seemed to grow very old in looks, and certainly in spirit he did not. At the particular time of my first meeting with him he was in the midst of a game of chess, and I do not think he relished the interruption, although he pretended it did not matter. However, it was my good fortune soon to come close to him when late in 1890 I came to New York to assist Rothwell on the *Journal*, and the latter, departing for a prolonged journey, enjoined upon me to look to Raymond as a guide, philosopher, and friend, and until I left the paper in 1892 we had such association.

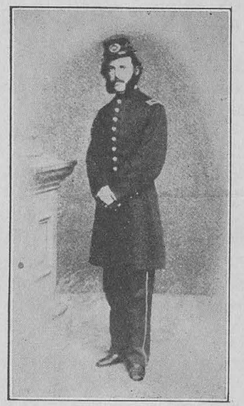
Rossiter Worthington Raymond was born in Cincinnati in 1840, son of Robert Raikes Raymond, a descendant from Richard Raymond, who came from England to Salem, Mass., about 1632. His mother, Mary Ann Pratt before her marriage, came also from an old New England family. Rossiter was the eldest of a family of seven children. He received his early education in the public schools of Syracuse, N. Y., whither his parents had removed, and in 1857 entered the Brooklyn Polytechnic Institute, of which his uncle, Dr. John Raymond, was then the president. Graduating from that institution in 1858, at the head of his class, he set out for Europe to continue his studies, taking passage in the clipper ship "Great Western," of the Black Ball line. Before the long and disastrous voyage was over Raymond had become the third mate, and the crippled ship, with half a rig and half a crew, and on half allowance of water, finally crawled down through the Irish Channel to Liverpool, a surprise to her underwriters. That was a stirring experience for a lad of 18, who manifestly exhibited the stuff that was in him to be appointed an officer out of the passenger list.

Landing in Europe, Raymond entered upon studies at Heidelberg and Munich, but especially at the Royal Mining Academy at Freiberg, where he remained until he completed them; whereupon he returned to the United States in 1861, and in August of that year entered the Federal Army, serving as aide-de-camp.

FREIBERG, 1860-1861



THE "GREAT WESTERN," 1858



FEDERAL ARMY, 1861-1864

with the rank of captain, on the staff of Major-General Fremont. During the campaign in the Valley of Virginia he was officially commended for gallant and meritorious conduct.

Retiring from the Army in 1864, he entered upon the practice of his profession as mining and metallurgical engineer in New York. Whether he formed his association with Dr. Justus Adelberg at once, or a little while later, I do not know, but, anyway, it was not long before the firm of Adelberg & Raymond was organized and was doing a rushing business. This was almost coincident with the birth of the mining industry in the United States. Indeed, except for gold mining, mostly placer, in California, and lode-mining on the Comstock, which had been discovered in 1859, there was no extensive mining going on in the great region west of the Rocky Mountains. The prospecting that was to result in the discovery of the rich ore deposits of Eureka, Nevada, and the Cottonwood Canyons, in Utah, was just being begun in 1863-64, but the curtain of the stage of active mining was not to be raised for five years. Further east there was mining for copper in the Lake Superior region, and lead mining on a small scale in the Mississippi Valley. The St. Joseph Lead Co. and the Granby company, to mine for lead and zinc, respectively, in Missouri, were just being organized. Truly, Raymond entered upon the practice of his profession at a psychologic time. Equally so was the institution, in 1866, of the *Engineering and Mining Journal*, in which Raymond naturally became quickly interested. It will be best to carry on this part of the story of Raymond's professional career in his own words, quoting from some reminiscences that he contributed to the paper upon its 40th anniversary. The paper was known for a year or two as the *American Journal of Mining*. Raymond wrote:

So far as I can recall, my own connection with the enterprise began with the contribution to the *American Journal of Mining* of a series of articles running from Apr. 27 to June 8, 1867, entitled "A Comprehensive View of the History and Present Standpoint of Geology, Being the Introduction to Prof. Bernard Cotta's New Work, 'Die Geologie der Gegenwart,' translated by Adelberg & Raymond, Mining Engineers."

Dr. Justus Adelberg, my business partner at that time, was an accomplished chemist and technologist, who had also acquired by personal experience considerable knowledge of mining conditions on the Pacific Coast. I was a young beginner, with nothing but my education at Munich and Freiberg, and my service (occasionally in the line of engineering) in the Union Army to qualify me for serious professional work. Adelberg's advice was, of course, invaluable to me. It was at his suggestion that I made the translation from Cotta, mentioned above, and gave it to the *Journal*, partly to help that enterprise and partly (perhaps chiefly) to advertise our firm.

Those were the days when mining experts were scarce and were eagerly employed. For some years Adelberg & Raymond did an immense business. Hermann Credner (afterward professor of geology in the University of Leipzig, and directer of the Saxon Geological Survey), Anton Eilers (famous now on his own account as metallurgical authority and captain of industry), Chas. A. Stetefeldt, O. H. Hahn, and others who subsequently distinguished themselves in American mining and metallurgy, were first employed as assistants by the firm. For some time my personal work was largely that of superintending the labors and editing the reports of such men, with only occasional opportunity for professional field work of my own. My prospect of gaining such needed contact with actual conditions and practice was further diminished when, as the consequence of my published translation from Cotta, I was requested by Western & Co., the publishers of the *American Journal of Mining*, first to contribute anonymous editorial paragraphs and afterward to assume publicly the position of editor. I did not replace, or immediately succeed, Mr. Dawson. There was an interregnum of one six-months' volume, during which Western & Co. were announced as "Editors and Publishers," and I did more or less editorial work for them.

My editorship of the *Journal*, which might have deprived me permanently of the benefit of actual practice, unexpectedly led to the contrary result. Certain articles of mine on the relations of the Federal Government to the mining industry on the public domain attracted the attention of some of the senators from the Pacific states; and in 1868, when Ross Browne was suddenly appointed U. S. Minister to China, I was invited to Washington, and, after a conference, was appointed to continue his work as U. S. Commissioner of Mining Statistics. Such an honor and opportunity could scarcely have come to a young man of 28 in any other way; and I have always regarded my connection with the *Journal* as a principal source of whatever subsequent professional knowledge and influence I was able to achieve.

During the years which followed I practically edited the *Journal* with one hand, while discharging official duties and earning my living by professional work with the other. This was not altogether good for the *Journal*. I could have done better work there if I had not been forced to do so much elsewhere. On the other hand, the *Journal* could not support me, except as it gave me a prestige which commanded other income for its support as well as my own. First and last, it cost me about $30,000—all of which, in my judgment, my connection with it enabled me to earn otherwise—so that I considered the outlay fully justified. It was not until Mr. Rothwell took the business in hand that it began to be really profitable and to realize the conception which I had cherished concerning it, but for lack of time and money had always been unable to realize.

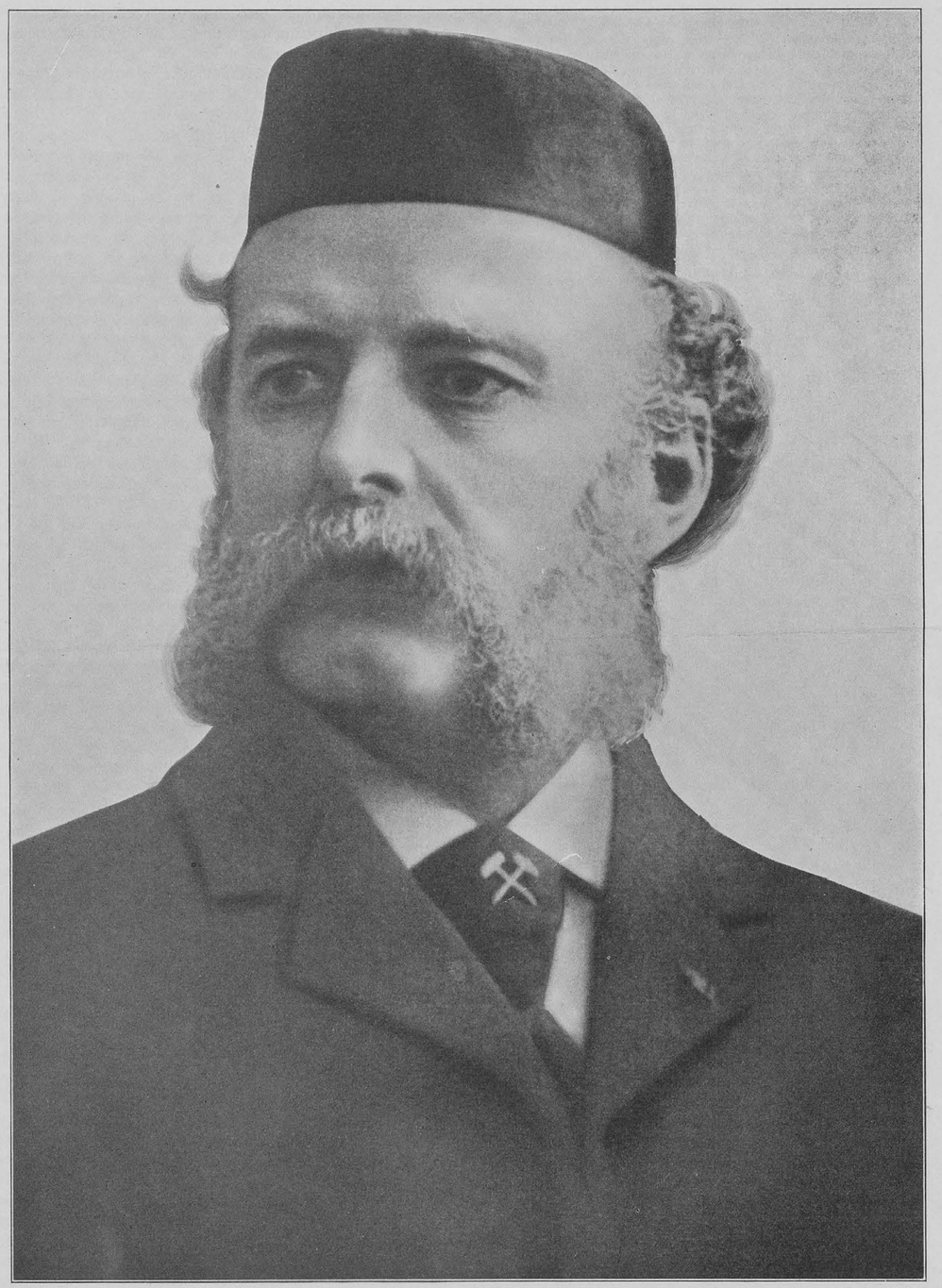
It was Mr. Rothwell who, by urgent personal appeal, induced me to attend the famous Wilkes-Barre meeting of 1871, at which the American Institute of Mining Engineers was organized. Unknown to either of us, this was the "parting of the ways" in our business relations—though there was never such separation in our friendship. Curiously enough, he, who had been one of the founders of the Institute, devoted himself supremely in later years to the *Journal*, while I, who had assisted the infancy of the *Journal*, have given my life to the Institute. I feel sure that the *Journal* did not suffer by this exchange, and I am as heartily proud of its subsequent success as if I had had more to do with it.

Raymond did not overdraw the activity of this period of his life. Besides the two responsible positions that he was filling, and his interest in the Institute and private professional work, he accepted an appointment as lecturer on economic geology at Lafayette College, and occupied that chair until 1882, while for one year during that period he gave the entire course on mining engineering. In 1873 he was appointed U. S. Commissioner to the Vienna Exposition, and as such delivered at Vienna addresses in the German language at the International Convention on Patent Law, an address at the International Meeting of Geologists, and an address in English at the meeting of the Iron and Steel Institute, in Liège, Belgium. During this period, however, it was his work as U. S. Commissioner of Mining Statistics, recorded in eight classic volumes, 1869-76, that stands out most prominently. The technical library that possesses the complete set now deems itself fortunate. Respecting this work and this period generally I may be permitted to quote from an editorial in the *Journal* published following a memorable occasion:

The celebration of Doctor Raymond's 70th birthday makes an appropriate occasion for the *Journal* to express its appreciation of the high services that in a professional career of nearly 50 years he has rendered to the mining industry of the world, its recognition of his help in advancing the standing of the profession of mining and metallurgical engineering, and finally its own respect that is due to him as a father, because, although he was not the first editor of the *Journal*, it was certainly he who shaped its editorial policy into that form which has come down as tradition and precedent. Raymond became editor of the *Journal* on July 13, 1867, and continued in that position until 1874, when the multiplication of his other duties necessitated his withdrawal from sole editorial control. He became, then, joint editor with R. P. Rothwell, this arrangement extending into the '80s, and finally a special contributor. Up to the present time no volume of the *Journal* has ever been published which has not contained some contribution by him.

The major portion of Raymond's sole editorship of the *Journal* was contemporaneous with his filling of the position of U. S. Mining Commissioner, and during that time he produced those wonderful volumes upon the mineral resources west of the Rocky Mountains which are the admiration of everyone who has had





ROSSITER W. RAYMOND

occasion to study them. Respecting them, the present editor of the *Journal* can speak with peculiar appreciation, because of the minute examination of them that was necessary in connection with an historical investigation. No one better than he can praise the beauty of their style, their language always clear, incisive and easily flowing; the accuracy of the descriptions, the keenness of the perception manifested throughout, and the remarkable prophecies that had to await only a few years for their fulfillment. Written 40 years ago, when the Pacific railway had just been completed, and the Great American Desert was receiving the first strokes of development, especially as to its mining industry, these volumes can be read with almost as much interest today as when they were penned, and they may be read also with profit. No other country possesses such a chronicle of the development of its mining industry, and we may rightly esteem these volumes as classics of mining literature.

From 1875 to 1895 Raymond was associated, as consulting engineer, with the firm of Cooper, Hewitt & Co., owners of the New Jersey Steel and Iron Co., the Trenton Iron Co., and the Durham and the Ringwood Iron Works, as well as numerous mines of iron ore and coal. As president of the Alliance Coal Co., and director of the Lehigh & Wilkesbarre Coal Co., and as a personal friend of Franklin B. Gowan, he became acquainted with the inner history of the memorable campaign against the "Molly Maguires," and ever since has been known as a fearless opponent of all tyranny practiced in the name of labor. His articles on "Labor and Law," "Labor and Liberty," etc., published in the *Journal* at the time of the Homestead riots, attracted wide attention, and for these, as well as similarly frank discussions of the operations of the Western Federation of Miners in Montana, Idaho, and Colorado, he received special denunciations and threats from the labor unions thus criticized. He was threatened with hanging if he should ever dare show his face in Butte, but Raymond was not made of the stuff to be scared by any such talk. On the contrary, he often expressed himself gleefully about it, and he made a point of visiting Butte at the first opportunity. While connected with Cooper, Hewitt & Co., he also assisted Abram S. Hewitt in the management of Cooper Union, and for many years directed the Saturday Evening Free Popular Lectures on Science, etc., which constituted the beginning of what has since become a vast lecture system in the City of New York.

During the major part of this period Raymond continued to be a joint editor of the *Journal*, with Rothwell, but that arrangement between two forceful men, two men of remarkable individualism, proved gradually to be impossible. Without the least impairment of their friendship, which continued unshadowed until Rothwell's death in 1901, there were nevertheless bound to be differences regarding editorial policies. A great journal of character, tradition, and policy must necessarily be edited by one man who is solely responsible for it. Raymond tried to circumvent this by publishing on the editorial page that he was responsible only for those articles that were marked by an asterisk. Old readers of the paper will remember that custom and will also remember, no doubt, how much interest they experienced in discerning the difference in the views of the two men. But that arrangement was finally recognized to be unwise, and Raymond ceased to be an editor, appearing subsequently as "special contributor," all of his articles being thereafter signed with his name. A special contributor he continued to be until his death, though some years ago, in conformity with our policy of not publishing the names of editorial collaborators outside our immediate office, we discontinued the publishing of his name, with his own hearty approval.

In the meanwhile, Raymond's absorption in the American Institute of Mining Engineers had been steadily increasing. An original member of it, he had been vice-president in 1871, 1876, and 1877, president from 1872 to 1875, and in 1884 he became its secretary, which was equivalent to saying its administrator. Before reviewing his great work in that capacity, however, his outside work may well be mentioned, for he always had a great deal of that on hand.

From 1885 to 1889 he was one of the three New York State Commissioners of Electric Subways for the City of Brooklyn, and served as member and secretary of the board, preparing its final report, which was generally regarded as the best statement of the problem of municipal engineering and policy involved in the distribution of electric conductors. The president of one of the companies expressed a desire to honor him as "one of the first American electrical subway engineers." At the close of his official term as commissioner, he became consulting engineer to the New York & New Jersey Telephone Co., which position he retained for a great many years.

In 1898 Raymond was admitted to the bar of the Supreme Court of New York, and of the Federal District and Circuit courts, his practice being confined to cases involving either mining or patent law, in the former of which he was a leading authority. In 1903 he was lecturer on mining law at Columbia University. He delivered numerous addresses at other colleges and universities, including Yale, Cornell, Lehigh, Lafayette, Union, California, the Worcester Polytechnic, the Brooklyn Polytechnic, and the New York College of Physicians and Surgeons.

But from 1884 to 1912 Raymond's greatest work was as secretary, administrator, and editor of the American Institute of Mining Engineers. His early instincts and habits as an editor here reappeared. He regarded the Institute primarily and preëminently as an organization for the dissemination of professional knowledge. He was essentially a publicist. He stimulated contributions upon subjects that he deemed should be expounded for professional benefit; he accepted what was voluntarily offered if it measured up to his standards, and he put everything into the most beautiful, polished and lucid literary style. There are several types of editors. There is the editor who is a director of a general program, dismissing the execution of details to others. In the execution of details, especially in the handling of manuscripts, there are two methods. One is simply to scrutinize, clarify, condense perhaps, and, while correcting errors of grammar and syntax, let the author in the main express himself in his own language. Another method is to do all those things but the last, instead of which the author's expressions are polished and perhaps repolished—perhaps entirely rewritten. In technique Raymond's method was the latter. To him contributions were more or less raw material, hewed out by ax and adze. He was the joiner, carver, and polisher. The immense annual volumes of the "Transactions," for a long series of years were essentially his work, and few people appreciate the infinite pains he took with them. But let it not be thought for one moment that



his mind was concentrated upon this delicate work to the exclusion of other thoughts of major character. He would work upon nothing but good material, and he made sure of its soundness before he put his hand to it at all. His immense erudition and extraordinary memory made him a keen and profound critic, and it was not often that anything imperfect passed his sieve. Nevertheless, he was human, and consequently not infallible.

Raymond not infrequently explained this style of editing. The president of a company, observing the publication of a paper in elegant diction over the signature of one of his superintendents, whom he knew to be rather awkward, if not exactly illiterate, remarked one day:

"Raymond, why are you trying to pull wool over our eyes? Bill never wrote that paper. He couldn't if he tried."

"No," replied Raymond, "Bill did not write it, but Bill did the work that the paper told about. It was good work, and information about it is important to the industry. It is my job to present such work in a way that it may be read easily and understandingly."

This epitomizes the philosophy of Raymond's editing. It was his aim to create a refined record of progress in the arts that concerned his professional colleagues and make it something of real use to them and those who should succeed them. In carrying out this ambitious idea he added to the archives of mining and metallurgy more than any other one man, not so much by his personal contributions, although they were important, always valuable, and always highly appreciated, but as the extractor and the producer of the records, views, and opinions of other men who had done things. The profession that witnessed and valued the results had perhaps but scant appreciation of the thoughtfulness and tireless energy that drew out these contributions and smoothed them into the clear and creditable essays and monographs of which the authors have been proud.

While on the subject of Raymond's editing, let reference be made to his own literary style in technical writing. This was as nearly perfect as anything could be. He was, indeed, the supreme master of us all. In the office of the *Journal* I made one standing order respecting Raymond's MSS. If they went to the composing room at all (almost always they did), they went just as he penned them, for it was certain that none of us could improve them even to the extent of one word, and it was equally certain that there were no errors to be corrected. Nor did he often desire to see a proof, but, if he did, there were rarely any alterations that he wanted to make. The characteristics of his style were incisiveness, crystalline lucidity, and wonderful fluency. He had a marvelous gift in choosing exactly the right word, for constructing ingenious and engaging phrases, and for producing perfectly balanced sentences, while his thought was developed in a logical array of consequential paragraphs. Raymond's technical essays were as nearly technical poems as anything technical can be.

Nearly all of Raymond's contributions to the *Journal*, which continued to the year of his death, and all of his private correspondence with me, which was often voluminous, was written by his own hand. His MSS. that were rarely typed were copies rather than dictations, for he did not like to dictate. Perhaps the excellence of his literary style had some connection with this. He wrote long, intimate letters in the old-fashioned way. His penmanship was graceful, and easily legible. Interlineations and corrections were uncommon. To compositors and to proof readers his "copy" was always a joy.

After 28 years of ministry as secretary of the American Institute of Mining Engineers, Raymond, in 1912, retired with the title of emeritus. He was then over 70 years of age, and, although he was as active and vigorous as ever, he failed to become fully conscious of new aspirations and new ideas among the membership, or perhaps he entertained different opinions respecting them. There was probably some of each of these explanations of his attitude. Anyhow, he preferred to let a younger hand take the helm and to direct his attention to special work that he particularly enjoyed, performing it in his old office at the Institute without having any worry about the day's routine of office details. He was well entitled to these last years of relative ease. However, he did not, even at 70 and later, seem to be old. Indeed, he used to say, himself, that he did not grow old; that he merely grew older.

I should be a poor biographer if I tried to depict Raymond as a man free from faults and foibles. He was very human, and, also, he was of a bold and strong character. Therefore it was not unnatural that he should be steadfast in his convictions; nor was it surprising that he should be sometimes opinionated and domineering; nor that he should exhibit considerable egotism. These traits often caused his younger associates to fear lest they should offend him. However, Raymond's was too open and generous a nature to take offense over any sincere, straightforward representation, even if it were a refusal of himself. I remember very well an incident between him and me. Soon after I had become editor of the *Journal* and he had sent me his best wishes in a very warm letter, he proposed a series of articles on a certain subject, which I accepted in principle. However, when I received the MS. I was considerably exercised over his treatment of the subject and was much disturbed over how to tell him just what I thought and felt I ought to do. But I made up my mind that the only thing was to be perfectly frank, so I wrote him that I did not think it wise either for the *Journal* or for himself to publish the articles, and, in short, I rejected them. To have to reject an article by Doctor Raymond was rather an appalling thought to me in my newness in the editorial chair, and I awaited his reply with a good deal of trepidation, really expecting something tart. I was immensely relieved when he wrote me that he thought I had done right. The flow of his usual contributions on his own good subjects kept right on.

Some years later Raymond said to me one day that he had to contribute a paper to the Pan-American Scientific Congress that was to assemble in Chile, that he was very much pressed by several things, and would not I do it in his stead? I told him that I also had my hands full and could not take over that task, but I would be glad to help him all I could, whereupon he proposed a collaboration. We spent an afternoon together, mapping out the paper, and agreed upon the parts that each would undertake. Having made our

drafts, we met again and read each other's notes, after which Raymond said, "Your opening paragraph will make a good introduction" (or it may have been I who said that to him), and then we agreed that his first paragraph would appropriately fit in next, then my second and third, followed by his second, and thus we combined our productions. They dovetailed together with singular aptness, and not even was it necessary to write in more than a few connecting sentences in order to preserve the continuity of thought. Probably I am the only man who ever collaborated with Raymond in a technical paper; anyway in recent years.

But what of Raymond's professional work? Well, it was, first of all, as a publicist, as an educator, as has already been revealed in this sketch. But, besides that, he won high distinction as a professional specialist. From his early years in the field he had exhibited a predilection toward the science of economic geology, particularly ore deposits. He had early been associated with Credner (his first publication was on a geological subject), and during his commissionership he had devoted special attention to the nature and forms of mineral depositions. Along with this attraction he possessed a mind of analytical and deductive character—an essentially legal mind. The United States, in so far as its national lands were concerned, had been cursed with a singularly fatuous law governing the location of mineral claims. This law became known as the "Law of the Apex" in popular parlance, and it being soon found that Nature did not deposit valuable ores in so simple a way as the framers of the law thought, there developed litigation between claimants who held that each was entitled to the same deposit, wholly or in part. Obviously, it then became necessary to study, classify, and interpret the ore deposit, so as to ascertain whether the law did or did not apply to it, and, if it did, how, where, etc. Manifestly this required the services of mining and geological experts, and it was natural that Raymond should promptly be requisitioned. The first great case in which he appeared was the celebrated Eureka-Richmond, which is the most noted of the early cases. In summarizing what Raymond did in this case, everyone who knows will agree with the following words of William Scallon, one of his legal colleagues:

> The first great case in which he appeared was the famous Eureka-Richmond, which is also the most noted of the early reported cases. That suit involved questions of fundamental importance, the correct determination of which was vital to the successful operation of the United States Mining Statute. The decision rendered in it has been, ever since, a beacon light for lawyers and for courts. It was Judge Field who rendered the decision, but it may well be said that it was Doctor Raymond who induced it, and the great jurist himself gave credit to Doctor Raymond for his convincing exposition of the views which the Court adopted; indeed, he adopted also his very words in the statement of these views. There, Doctor Raymond successfully maintained that the law was made for the practical miner and the prospector, rather than for the geologist, and should be read in the light of practical experience and interpreted as practical mining men would understand it. The law is, even now, the occasion of so many uncertainties, that one can hardly imagine what condition would have ensued if Doctor Raymond had not, at that early day, succeeded in his advocacy of this beneficent rule. In the case referred to, it was as a witness that Doctor Raymond advanced his views; since then he has published many writings on the subject of the mining law. These have been the contributions of a publicist to the discussion of a subject of public interest. They have been no less influential in assisting and directing legal and judicial thought. Mr. Curtiss Lindley, the author of a leading textbook on mining law, has made acknowledgment, in his preface, of the great value of Doctor Raymond's discussions and writings. For myself, it is with a sense of personal obligation that I speak of these works of Doctor Raymond, for, when I took up the study of Federal mining law, there were no treatises in existence, and his illuminating writings shed a gladsome light on the intricacies of the subject. I recall with ever-increasing pleasure that I had the good fortune of professional association with Doctor Raymond in the last great underground controversy in which he appeared in court. That was at Butte. With him, too, on the same side this time, was his brilliant antagonist of the Eureka case, the learned, lovable, and dearly remembered Clarence King, as well as Mr. Brunton, and other able and distinguished men. That they won goes without saying. It is worthy of mention that, as in his first case, so in his last, the Court paid Doctor Raymond the notable compliment of quoting his felicitous language in expressing its own conclusions. Thus, we see that Doctor Raymond has been a luminary of the jurisprudence of mining, as well as of its geological and technical departments.

Raymond's brilliant exposition in the Eureka-Richmond case created a great demand for his services, and his experiences in this branch of professional work were wide and varied. Generally he was on the victorious side, which of course was not at all a matter of luck, but purely of his judgment. In one case the opposing party surrendered before trial, after a conference between its expert and Raymond, in which the latter convinced the former. On another occasion, though not at that time a member of the bar, he was invited by the U. S. Supreme Court to address it on a point in mining law; and his exposition was accepted by the court in rendering its opinion.

But Raymond was in no wise a fomenter of mining litigation. On the contrary, he was a deprecator of the absurd law that fostered it, a law that has cost this country the ransom of an empire. In an essay on "The Law of the Apex" in 1883 he exposed its stupidity and its dangers, and he made it a part of his life-work to fight for the cancellation of that part of our mining law. In this campaign he was the pioneer. The law still stands unamended upon our statute books, owing to the ignorance and sluggishness of our legislators, who have been deaf to demands for its reform; but its evil has been greatly minimized by the tacit consent of people in the mining industry to disregard it and arrange things in their own sensible way.

This sketch has dealt mainly with Raymond's professional career, his working life. It has all been "shop," so to speak. There was another side of his life that his professional colleagues did not know so well, although, of course, we heard a good deal about it and had some insights into it. But surely we did not know all the things that Doctor Hillis told in his memorial address. Raymond from his youthful days was one of Brooklyn's foremost citizens and for 60 years he was a pillar of Plymouth Church. We knew him as "Doctor Raymond." In Brooklyn he was "Ros. Raymond," or "Uncle Ros." He had early become prominent in the affairs of the church, among other things conducting its Sunday School. When Henry Ward Beecher was called away from a service one Friday evening in March, 1887, to keep an engagement elsewhere, he called Raymond to the platform to take charge, and, turning to the audience, said: "You see I leave you in good hands." This proved to be Beecher's farewell, for before the next meeting he was stricken with his last illness. In this emergency the leaders of the church turned to Raymond. Doctor Hillis told this:

> When Thomas Shearman and S. V. White and others came to see me in Chicago just 20 years ago, they said that after Mr. Beecher's death they went together to Rossiter W. Raymond and asked him to give up his work as editor, lawyer and mining engineer and take the pastorate of Plymouth Church, to whom Dr. Raymond replied, as my old notes show, that the Providence of God, through his fathers, had lent him certain gifts ,and by His Providence guided him into an appointed path, and now that his life journey had been two-thirds fulfilled, he did not believe that the Lord was going to return to the beginning of that path and reverse Himself, and he would, therefore, follow the way appointed to the end thereof.



This report of a call of Raymond to the ministry is not so surprising a revelation of another of his many sides as some might think. Even at that time, Raymond had gone deeper into theology than most clergymen ever succeed in going. During the winter of 1885, while Mr. Beecher preached in the auditorium of Plymouth Church, Raymond lectured on the history of Israel, by Ewald, and upon Old Testament problems, as stated by Robertson Smith and Canon Driver. This was the time when the Presbyterian Church was in the throes of the heresy trial of Professor Briggs. While other churches were torn apart by the discussion of those questions, Plymouth Church went through the heated epoch without disturbance, upheaval, or fear. I am quoting Dr. Hillis.

Raymond initiated the custom 50 years ago of writing an annual Christmas story for the Sunday School of Plymouth Church, which he read about Christmas time. Never a year passed when he failed to make this contribution, which he caused to be printed as a little pamphlet for the benefit of his pupils and for his friends outside of the church circle. The latter always appreciated highly this Christmas remembrance from Raymond. His story-writing ability, which was exhibited in several novels and collections of short stories, and his poems, exemplified by his inspired ode on "The Grand Cañon," showed other facets of his many-sided ability.

Still another one was his skill as a chess player. I have mentioned already that the first time when I met him he was in the midst of a game of chess. At the dinner in honor of his 70th birthday, a silver service was presented to him. One of the pieces was engraved with the symbols of the game of chess, indicating this incidental accomplishment of Raymond's. In making the presidential address, Doctor Douglas said:

> I understand that Doctor Raymond once drew a hard-fought two-hour game with Steinitz; that he holds a gold medal as the winner of a chess tourney; and some of you remember how, in 1908, a confident group of chess players on the "Campania" challenged the chess players on the "Oceanic" to a game by wireless telegraph, and got the worst of it, because Doctor Raymond directed the defense.

A complete enumeration of Doctor Raymond's writings and honors must be left for the book that will surely be written about him by someone. Enumeration would be impossible in a sketch so brief as this. Some of his more important works were the following: "Die Leibgarde" (1863), a German translation of "The Story of the Guard" by Mrs. Jessie Benton Fremont (1863); "The Children's Week" (1871); "Brave Hearts" (1873); "The Man in the Moon and Other People" (1874); "The Book of Job" (1878); "The Merry-go-Round" (1880); "Camp and Cabin" (1880); "A Glossary of Mining and Metallurgical Terms" (1881); "Memorial of Alexander L. Holley" (1883); "The Law of the Apex and Other Essays on Mining Law" (1883-95); "Two Ghosts and Other Christmas Stories" (1887); "The Life of Peter Cooper" (1897); "Christus Consolator and Other Poems" (1916); various technical works and papers on mining law, as well as numerous addresses and magazine articles, and contributions to several American dictionaries and encyclopedias.

Throughout Raymond's distinguished career honors were showered upon him. He was made an honorary member of the American Philosophical Society, the Society of Civil Engineers of France, the Iron and Steel Institute, the Canadian Mining Institute, the Mining Society of Nova Scotia, and the Institution of Mining and Metallurgy of Great Britain, and numerous other technical and scientific organizations both at home and abroad. He received the degree of Ph.D. from Lafayette College in 1868, and that of LL.D. from Lehigh University in 1906. On the latter occasion, speaking as an adopted alumnus of the university, he delivered to the graduating classes an address on "Professional Ethics" which has been widely quoted and approved. In 1908 the Institution of Mining and Metallurgy awarded to him its gold medal.

In 1911, during the visit to Japan of a party of members and guests of the American Institute of Mining Engineers, Raymond received from the Mikado the distinction of Chevalier of the Order of the Rising Sun, fourth class, the highest ever given to foreigners not of royal blood, "for eminent services to the mining industry of Japan." These services consisted in advice and assistance rendered in America to Japanese engineers, students, and officials throughout a period of more than 25 years. In February, 1915, Raymond delivered the commemorative address on the 150th anniversary of the foundation of the University of Pittsburgh, and received its honorary degree of LL.D.

Raymond died very suddenly on the afternoon of the last day of 1918. He had been ailing a little for a few days previously, but the trouble did not seem to be of much consequence. On the previous Sunday morning he had read his fiftieth annual Christmas story in the Bible School of Plymouth Church, and on the previous Friday evening he had made a long address on the spiritual influences of the Great War. Doctor Hillis had asked him to speak on the forgiveness of enemies national. He began his address by saying that he much preferred to speak upon another theme, particularly because he found himself in full sympathy with the imprecatory psalms, and that as far as the forgiveness of our enemies who had butchered Belgium were concerned, there were moments when he understood how the chief of a cannibal tribe in the South Sea Islands felt. Asked by the missionary whether or not he was willing to forgive his enemies, the chief answered: "Certainly, certainly. Last week I ate them all up." "Then Doctor Raymond delivered one of the most brilliant addresses on what this war has done to the soul of the American people to which any of us had ever listened," said Doctor Hillis. "Never was he in finer form. Notwithstanding his nine and seventy years, his mind glowed and sparkled through 40 minutes. Never did he seem more lovable, more gentle. There was in his carriage always a certain note of chivalry. He seemed a Twentieth Century embodiment of the Knight Errants of Sir Thomas Mallory. Those of you who recall his youth think of him as a kind of Sir Galahad, and those who remember his age think of him as Sir Percival, who saw the Holy Grail because his heart was pure."

Raymond felt very deeply regarding the holiness of the cause of the Allies in the war, as readers of the *Journal* know from some of his contributions this year and last. I am reproducing his last contribution, which we published Sept. 14, 1918. When he sent it to me he suggested that it might not be suitable for an engineering paper. I replied that anything that helped the great cause was suitable for any kind of a paper, and this, his last contribution, well illustrates his wit:

To engineers especially, the explanations offered by the German staff and the German press, to account for the successive defeats of the German army, are peculiarly amusing. The other day, we were told that Ludendorff had shown masterly ability in throwing enormous reserves into the Marne salient, so as to facilitate the retreat of the force already there—which reminds me of the story of the Irishman who was seen punching a greenback down between the boards of the Atlantic City boardwalk. His explanation was that he was not wasting the greenback at all—he had lost a nickel in that crack, and he was simply putting enough after it to make it worth his while to take up the planks.

But the latest of these amusing *camouflages* is the pæan of triumph over 'our victorious retreat," of which the following verses may perhaps be regarded as a sufficiently accurate echo:

AN INTERVIEW

"Wilhelm, what blacked your eagle eye?"
"O curious journalist!
It was this eye, now swollen high,
That smote old Foch's fist!"

"And, Wilhelm, 'seems to me you limp
And stumble as you go."
"'Tis true, I gave my leg a crimp
In stamping on the foe."

"O Wilhelm! whence, for goodness' sake
That footprint on your seat?"
"That's where he failed to overtake
My masterly retreat!

"For I, when he came on apace,
With frenzy born of fear,
Strategically saved my face
Behind my conquering rear.

"Yes, even in battle's dread array
The leader still I'll be;
To hostile hosts I'll show the way,
And they shall follow me!

"Now let those brazen bands of mine
Strike up the usual tunes,
Beginning with *Die Wacht am Rhein,*
And ending, *Gott mit Uns!*"

Five or six years ago I began to tease Raymond to write his personal reminiscences, especially of the period from 1865 to 1880, and Arthur Dwight joined me in trying to persuade him to do so; but we did not succeed, although I am sure that we tempted him strongly. However, he had his heart set upon writing a history of the Institute (which perhaps might have come more or less to the same thing) and he wanted to devote his remaining years to that. We do not know how far along he got with it. One of the most beautiful things about Raymond's life was his devotion to his wife, whom he married in 1863, she being a daughter of William and Mary Dwight, of Brooklyn. In recent years, Mrs. Raymond's eyesight failed, and, to entertain her, the Doctor read to her a great deal and let his own interests go.

The American mining industry has lost during the last year three great men—Eilers, Douglas, and, lastly, Raymond. They were contemporaries, born at about the same time and dying within a narrow space. All three attained ripe years, and together they did more for our mining and metallurgy than any other three men. The association between Raymond and Eilers was one of beautiful, lifelong friendship. Eilers was born a year earlier and died a year earlier. He joined Raymond as an assistant about 1866, and continued with him through the years of the commissionship. Thereafter, when Eilers took up his residence in the West, his hospitable roof was always a home for Raymond, and, as the latter said, after more than half a century he could not recall a single occasion of even temporary and passing discord to mar that perfect friendship.

Raymond was one of the most remarkable cases of versatility that this country has ever known. Sailor, soldier, engineer, lawyer, orator, editor, novelist, storyteller, poet, Biblical critic, theologian, teacher, chessplayer—he was superior in each capacity. In some he was superlative. In none was he mediocre. It was given to him to possess supreme powers in two ways—as a publicist and as a professional specialist. Almost any man deems himself distinguished if that can be said of him in one thing. Yet according to Raymond's own view he had not done the things he intended to do, but rather had unconsciously obeyed the maxim of Browning to "Get thy tools ready; God will find thee work." Rather than to work of creative and constructive leadership Raymond, in his own words, gave his life and his strength to the vocation of an interpreter, chronicler, guide, and assistant to engineers. That is, I think, an approximate, but not an absolute, summary of his professional work. But even if there were no more, is not his own modest estimate enough to be satisfying? Raymond exalted his philosophy and his religion in these splendid words that he spoke at Eilers' funeral:

And yet—and yet—can this be the end? Love says, No! and Science says, No! For the very existence of science demands the assumption of a rational universe. Nature must not tell us lies. Her evidence must be interpretable. And science, starting on that basis of faith in honest evidence, has discovered not only order but purpose in the evolution of the universe. We can read the progress of that purpose in ages past, from primordial slime through the ascending forms of life, to savage man, barbaric man, civilized man—through specific features to personality. Science confirms the poet who says, "An honest man's the noblest work of God." And science cannot receive with respect the conception of a Being who would spend aeons in careful, patient preparation to bring forth a man only to destroy him—a God blowing bubbles, and, just when such a radiant sphere has reached its brightest rainbow glory, dashing it into mist, in order to begin another with futile inflation. How childish, how absurd! No; we demand a reasonable universe and a respectable God—we students of science. We will not accept the notion that earthly death ends all. It is too ridiculous!

And as Raymond said to Eilers' spirit not farewell, but *auf wiedersehen,* so said many friends over his own outworn body.

MARY AESOP — DWIGHT — DAUGHTER, NAME?

ELIZABETH RUSSELL 1740-1830 — JAMES MELLEN 1739-1812 — ELIZABETH MELLEN 1770-1860

SARA PERRY 1737- — PETER FISKE 1723- — JOHN FISKE 1770-1855

AUBAM ROSS 1731- — ELIJAH CLAPP 1731- — THIRSHAH CLAPP 1781-1871

EBENEZER MERRIAM 1751-1790 — DAN MERRIAM 1771-1823

WILLIAM R.DWIGHT — MARY WARREN FISKE 1800-1887

ABBY FISKE 1812-1875 — 1) GEORGE SPRING — 2) GEORGE MERRIAM 1803-1880

SUSAN RAYMOND MERRIAM 1849-1937 — JOHN RAYMOND HOWARD 1837-1926

10 CHILDREN

1.-FRANK W. HOWARD 1872-
2.-GEORGE M.HOWARD 1873
3.-ANNIE HOWARD CHAPIN DWIGHT 1875-1968
4.-ETTA S. HOWARD 1877-1878
5.-ROSSITOR HOWARD 1878-1950
6.-TASKER HOWARD 1879-
7.-JOHN R. HOWARD Jr. 1880-
8.-E. FORD HOWARD 1881-1903
9.-CARRINGTON HOWARD 1883-
10.-JAMES M. HOWARD 1885-

GEORGE DWIGHT

MARY DWIGHT MARRIED PERCY ATHERTON

SARAH DWIGHT MARRIED ROSSITER W.RAYMOND

1) ELIZABETH FISKE DWIGHT 1833-1865. BENJAMIN PIERCE SMITH 1830-1881 — 2) HELEN ALDRIDGE

WILLIAM DWIGHT SMITH CHANGED TO WILLIAM SMITH DWIGHT 1860-1883

ARTHUR EDWARDS SMITH CHANGED 1886 To ARTHUR SMITH DWIGHT 1864-1946

1) JANE EARLE REED 1868-1929 NO CHILDREN

2) ANNIE HOWARD CHAPIN 1875-1968 6 CHILDREN FROM 1) THOMAS CHRISTY CHAPIN 1871-1916

(ARTHUR S. DWIGHT'S STEP-CHILDREN)

| SIX CHILDREN | GRANDCHILDREN | GREAT GRANDCHILDREN |
|---|---|---|
| RUTH HOWARD CHAPIN DAWES 1900-1975<br>1) GEORGE LONGFORD DROUGHT<br>2) EPHRAIM CUTLER DAWES | NONE | |
| BARBARA CHAPIN HAMBY 1902-<br>1) WILLIAM I. HAMBY | BARBARA HAMBY<br>1) JAMES P. McLANE<br>2) EARL BEATT | JAMES PRICE McLANE<br>PETER McLANE<br>SUSAN MERRIAM McLANE<br>MATHEW McLANE |
| | LYNN HAMBY<br>1) ROBERT MESSNER<br>2) EDWARD NORRIS | ANNE MESSNER<br>WILLIAM HAMBY MESSNER<br>PATRICIA MESSNER |
| HELEN SPRING CHAPIN 1904-1945 | NONE | |
| CONSTANCE CHRISTY CHAPIN 1906-1981<br>1) ERNESTO de la OSSA<br>2) WALTER DENNIS | ELENA de la OSSA 1934-<br>1) JOHN M.KINGSLAND | SUSAN CONSUELO C.KINGSLAND<br>SAMUEL CHAPIN DWIGHT KINGSLAND |
| | ARTHUR DWIGHT de la OSSA 1936-<br>1) MARCIA EMERY | CHRISTY ANNE de La OSSA<br>KATHRYN de la OSSA |
| THOMAS CHRISTY CHAPIN 1908-1981 | 1) GRETCHEN GREENAMYER<br>2) SUSAN HAUGHTON<br>3) EMMA GRIDLEY REED STUART | ANNE CHRISTY (HAUGHTON)<br>1) KLEINSCHNITZ |
| ANNE HOWARD CHAPIN WESTON 1913-<br>1) NORMAN B. WESTON | MICHAEL WESTON 1938 | 2 SONS |
| | CAROL WESTON 1942-ROBERT KLEIN | 2 CHILDREN |
| | JOHN HOWARD WESTON 1945 | 2 CHILDREN |
| | MARK BETTS WESTON 1952 | NONE |

For earlier generations, see Chart by John T, Howard in 1934 for Annie Howard Chapin Dwight.

GENEOLOGICAL CHART BASED ON CHART BY JOHN T. HOWARD, 1934. ALSO, ELENA KINGSLAND, CONSTANCE CHAPIN de la OSSA DENNIS AND BARBARA CHAPIN HAMBY. JULY 25, 1983 REVISED FROM FAMILY RECORDS BY ARTHUR S. DWIGHT

ARTHUR SMITH DWIGHT

ANNIE HOWARD CHAPIN DWIGHT

R.W.ROWEN, JULY, 1983

# FAMILY SHEET

Husband's Code .....
Wife's Code .....

HUSBAND'S NAME ARTHUR SMITH DWIGHT 2. WIFE ANNIE HOWARD CHAPIN

Date of Birth MARCH 18 1864 Place TAUNTON, MASS

Date of Death APRIL 1, 1946 Place HOBE SOUND, FLORIDA

Present Address (or) Place of Burial ALL SAINTS, GREAT NECK, L.I., NEW YORK

His Father BENJAMIN PIERCE SMITH His Mother's Maiden Name ELIZABETH FISKE DWIGHT SMITH

Date of Marriage of HUSBAND and WIFE on this sheet March 11, 1930 Place HARTFORD, CONNECTICUT

Check here if there was another marriage: By husband ☒ By Wife ☒ Was this couple divorced? Yes ☐ No ☒ When?

WIFE'S MAIDEN NAME ANNIE HOWARD CHAPIN (Use separate sheet for each marriage)

Date of Birth MARCH 3, 1875 Place BROOKLYN, N.Y.

Date of Death JANUARY 15, 1968 Place NEW YORK, N.Y.

Present Address (or) Place of Burial

Her Father JOHN RAYMOND HOWARD Her Mother's Maiden Name SUSAN RAYMOND MERRIAM

Items of interest about the above couple (occupations, hobbies, achievements; social, civil, and political activities; physical descriptions—include photos if possible; military service; cause of death):

Do not write in this space ↓ Do not write in this space ↓ Use reverse side for additional information

| Have family sheet | | CHILDREN (Arrange in order of birth) | Code | Birth Information | Death Information | Marriage Information |
|---|---|---|---|---|---|---|
| | 1 | RUTH CHAPIN DAWES | | ON APRIL 6, 1900 AT MONTCLAIR N.J. | ON NOV. 3, 1975 AT MATAWAN, N.Y. | 1) 1942 GEORGE LONGFORD DROUGHT TO |
| | 2 | BARBARA CHAPIN HAMBY | | ON JAN. 8 1902 AT WINCHESTER MA. | ON AT | ON SEPT. 27, 1929 WILLIAM I. HAMBY |
| | 3 | HELEN SPRING CHAPIN | | ON JULY 30, 1904 AT BROOKLINE MA | ON JAN. 4 1943 AT COLORADO SPRINGS CO | ON NONE TO |
| | 4 | CONSTANCE CHRISTY CHAPIN de la OSSA | | ON DEC. 3, 1906 AT BROOKLINE MASS | ON JUNE 9, 1981 AT NEW HAVEN, CT | 1) 8/1/32 ERNESTO de la OSSA 2) 11/7/69 WALTER DENNIS |
| | 5 | THOMAS CHRISTY CHAPIN | | ON MARCH 25, 1908 AT NEWTON CENTER MA | ON JUNE 9, 1981 AT NEW HAVEN CT | 1) GRETCHEN GREENAMEYER 2) SUSAN HAUGHTON 3) EMMA R. STUART 6/2/52 |
| | 6 | ANNE H. CHAPIN WESTON | | ON JAN. 24, 1913 AT NORTHFIELD MA. | ON AT | ON 1937 TO NORMAN B. WESTON |

Additional children ☐

Footnoting. To substantiate the information recorded on this page, please use the footnotes listed below. One of these numbers should be placed in the circle provided next to each answer on the questionnaire. If you got the information from a source not listed, place that source on a vacant line and use the number next to which it has been placed as your footnote number.

Use ① only if you have filled in the blank from personal knowledge (such as the name of your brother). If you must look up his marriage date, give as the source wherever you looked it up. If you asked him, give his name as the source.

① Name and address of person filling in this sheet. Date

ELENA KINGSLAND 505 EAST 79th STREET, NEW YORK CITY 10021

② BARBARA C. HAMBY 140 EAST 38th STREET, NEW YORK CITY 10016

③ ROBERT W. ROWEN 1510 WEST ARIANA STREET, LAKELAND, FLORIDA 33803

④

⑤

⑥

⑦

⑧

Form B-100

# COL. A. S. DWIGHT, 82, A MINING ENGINEER

## Co-Inventor of Sulphide Ore Sintering Process, Head of Metallurgical Firm, Dies

Special to THE NEW YORK TIMES.

HOBE SOUND, Fla., April 1—Col. Arthur Smith Dwight, mining and metallurgical engineer of New York and Hobe Sound, died of a heart attack in his home here today. His age was 82.

Colonel Dwight was co-inventor with R. L. Lloyd of the Dwight and Lloyd sintering process for sulphide ores. He was president of the Dwight and Lloyd Sintering Company, and the Dwight and Lloyd Metallurgical Company of New York.

### Honored by Columbia

Born in Taunton, Mass., Colonel Dwight was a son of the late Benjamin Pierce Smith and the late Mrs. Elizabeth Fiske Dwight Smith. By authority of the King's County Court in 1880, he assumed his mother's maiden surname. He received an E. M. degree from the Columbia University School of Mines in 1885. From Columbia he also received an honorary M. Sc. in 1914 and an honorary D. Sc. in 1929.

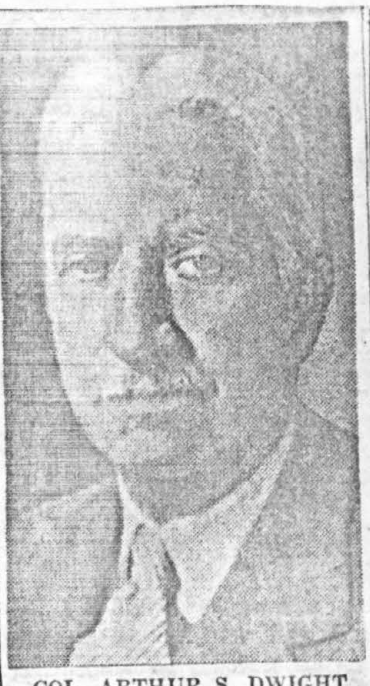
Colonel Dwight came to New York in 1906 and had since then made his business headquarters here. At first he practiced as a consulting engineer. Soon he and Mr. Lloyd began to plan their companies. In 1908 they invented their sintering process, and in 1909 they founded the Dwight and Lloyd Metallurgical Company. In 1912 they founded the Dwight and Lloyd Sintering Company. Mr. Lloyd was vice president of the companies until his death in 1937. Colonel Dwight had been president of the Thornewood Construction and Securities Corporation and the Tirrill Gas Machine Corporation as well as of the other two concerns.

In 1942 the American Institute of Mining and Metallurgical Engineers awarded to him the James Douglas Gold Medal, primarily for his work in connection with the sintering process.

### Cited by General Pershing

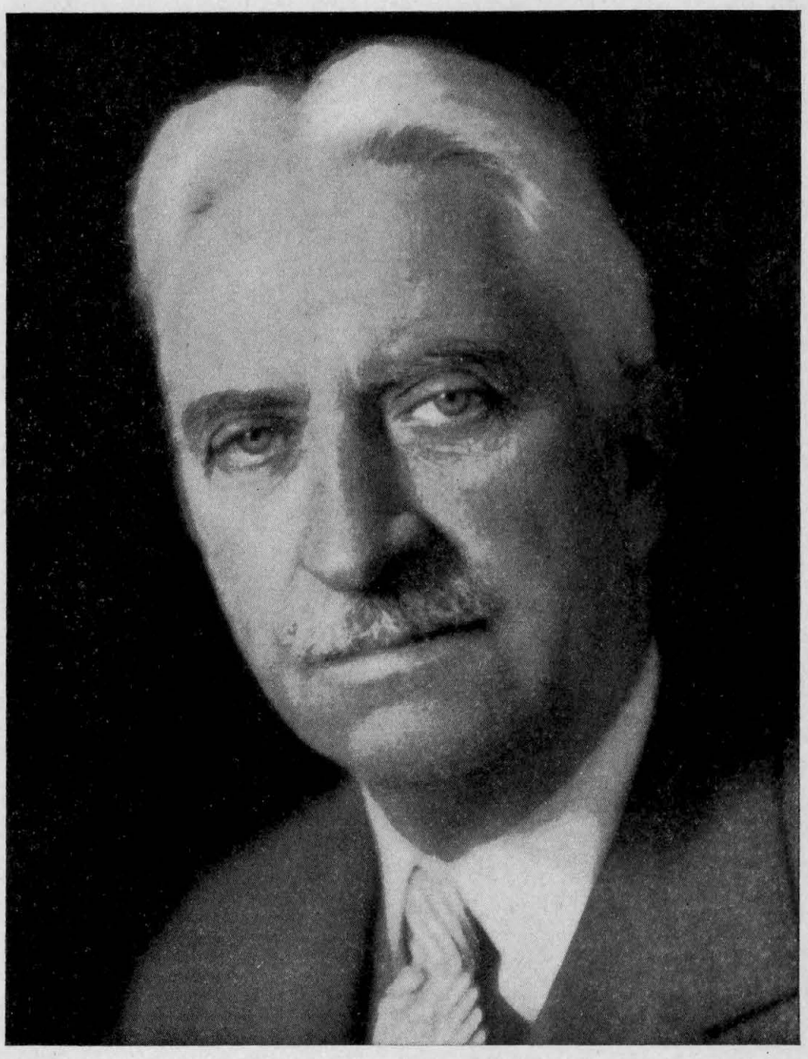
In the first World War he assisted in the organizing of the First Reserve Engineers, later the Army's Eleventh Engineers, which was the first engineering unit of the American Expeditionary Force to see action in France in which he was connected. Subsequently he did special work as a metallurgical consultant to French companies. He received the Purple Heart and was cited by Gen. John J. Pershing. After the war he was a colonel in the inactive Reserve.

He served as a vice president of the United Engineering Trustees, a joint agency of four engineering societies, was a former trustee of Columbia University, and served on the Committee on a War Memorial to American Engineers, which raised money for the clock and carillon installed in the library tower of the University of Louvain, Belgium, as a memorial to American engineers who died in the first World War.



COL. ARTHUR S. DWIGHT

THE NEW YORK TIMES, TUESDAY, APRIL 2, 1946.



*Arthur S. Dwight*

# James Douglas Medalist

TO metallurgists generally, Arthur S. Dwight is no stranger even to those who do not know him personally. He is one of those contributors to technical progress whose names will go down to posterity because of their being attached to a successful machine or process, such as Dorr, Hardinge, or Marcy, or Wedge, MacDougall, or Herreshoff. The roasting and sintering method and equipment developed by Colonel Dwight and his associate, the late Richard L. Lloyd, may be found in lead smelters throughout the world, and also in many metallurgical works dealing with other ores, including those of iron. It is ordinarily used to desulphurize and agglomerate fine ores for subsequent smelting. Colonel Dwight's citation as James Douglas Medalist reads: "For his contributions to the art of smelting nonferrous ores; and particularly for his pioneer work in developing equipment and technique for sintering such ores and metallurgical products." The medal was awarded at the last Annual Meeting of the A.I.M.E. but unfortunately the medalist was unable to leave Florida at the time to receive it in person.

Arthur S. Dwight, born in Taunton, Mass., March 18, 1864, obtained his E.M. from the Columbia School of Mines in 1885, and later Columbia bestowed upon him the honorary degrees of M.Sc. and D.Sc. as well. For thirteen years after graduation he worked for the Colorado Smelting Co., Pueblo, under Anton Eilers, first as assayer and last as general superintendent. Thereafter he was associated with several large companies in the mining and smelting of lead, copper, and the precious metals, both in the Western States and in Mexico. Just before returning to New York to establish a consulting practice in 1906 he was general manager of Cananea, in Mexico, and established a reputation in quite another field than metallurgy by his handling of the revolutionary elements that attempted to overthrow the Diaz regime, first seizing the mines and their supplies.

Colonel Dwight achieved a standing as a military organizer in the first World War no less than his reputation in the metallurgical field. He was one of the pioneers in creating the Engineer Officers Reserve Corps at that time, and was commissioned a major in the first Reserve engineer regiment. This was later known as the Eleventh Engineers, which sailed for France July 14, 1917, the first A.E.F. unit to see action. He served in France for almost two years, receiving the D.S.O. from the British, a citation from General Pershing, the French Legion of Honor, and the Order of the Purple Heart (U. S.). He retired from military work as a Colonel of Engineers, U. S. Reserve.

Since the war, Colonel Dwight has been the active head of the Dwight & Lloyd Sintering Co. and the Dwight & Lloyd Metallurgical Co., with headquarters in New York City. He is a life member of the A.I.M.E., having joined 57 years ago, and was President of the Institute in 1922, having previously served as Councilor, Director, and Vice-President. He is also a distinguished member of several other societies, and holds an honorary membership in the Institution of Mining and Metallurgy, of England. He lives at Great Neck, L. I., and at Hobe Sound, Fla. in the wintertime.

Reprinted from MINING AND METALLURGY, September, 1942

COLUMBIA ENGINEERING

# ALUMNI TIMES

VOLUME 23 NUMBER 1 AUTUMN 1982

# Innovative Columbia Engineers: Three Profiles


## Joseph Engelberger

Joseph F. Engelberger '46 is the founder and president of Unimation, Inc., the division of Condec Corporation that is the world's leading producer of industrial robots.

The author of *Robotics in Practice*, he is generally considered the driving force in the creation of the industrial robot industry. The Robot Institute of America annually presents the Joseph F. Engelberger Award to "a person who has contributed outstandingly to the science and practice of robotics." Among the many honors he's received are the Progress Award from the Society of Manufacturing Engineers, the Nyselius Award from the American Die Casting Institution, and the Leonardo da Vinci Award from the American Society of Mechanical Engineers. He has appeared on numerous television shows, among them *NBC Magazine*, *The Merv Griffin Show*, and *The Tonight Show*. On Japanese television he is introduced as "the father of robotics."

Joe served in the U.S. Navy after graduating from Columbia, then joined Manning, Maxell, and Moore, where he rose to become general manager of the aircraft products division before leaving in 1958 to found Condec, whose primary business is aerospace and nuclear controls.

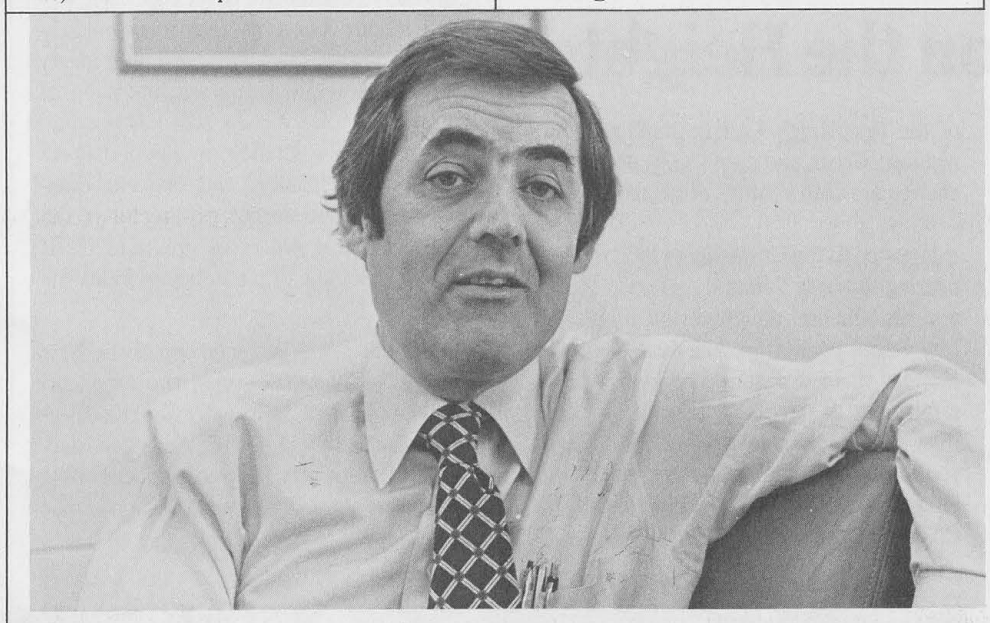
A practical-minded man and an engaging speaker, Joe addressed an overflow audience at the Engineering School as Armstrong Memorial lecturer last spring. After reviewing the history and state of the art of robotics, he answered questions about social effects of the increased use of robots in American industry.

*"The Man with the Hoe* was better off than most modern factory workers," he declared, explaining that robots are already helping to improve working conditions, by taking over particularly dull or dangerous tasks. Most importantly, though, robots provide dramatic increases in productivity.

"A productivity gain is always good. The question is, what do we do with the gain? Do we want to have a shorter work week? That's one of the possibilities. Would we like clean air and water? Three percent of the GNP will give us a clean environment. The point is to separate out the problems, not just say, 'Gee whiz, people are going to lose their jobs.' So far, we've created a hell of a lot more jobs than we've displaced. And a lot of engineers are having a lot of fun."

Forecasting the future of robotics, Joe Engelberger sees the household robot as "a possibility within this decade." Such robots would be able to repair and maintain home appliances, wash dishes, and prepare convenience foods, taking care of difficult problems by communicating via telephone with a more expert robot.

Asked about the much-talked-of Japanese technological challenge, he's quite certain that "Japanese industry has no technical edge at all over the U.S., Europe, or iron curtain countries. What the Japanese do have is the ability to run with new technology, to absorb and utilize it. There's our challenge."



## Filippo Galuppi

While consulting for Philips Electronics in the early 1960's, Filippo Galuppi '52 discovered that there was virtually no source of high-voltage power supplies both small enough and reliable enough at high altitudes to be used in the moon surveyor program he was working on. In 1962, he formed Venus Scientific, to continue his work as a circuit design consultant and begin manufacturing the miniature high-voltage power supplies for which a small, unsatisfied market already existed.

He accurately foresaw the growth in demand for his major product; by 1972, Venus had grown to a million-dollar-a-year manufacturing business. In 1982, it's the world's largest producer of miniature high-voltage power supplies, employing 300 people, and is expected to gross $11 million.

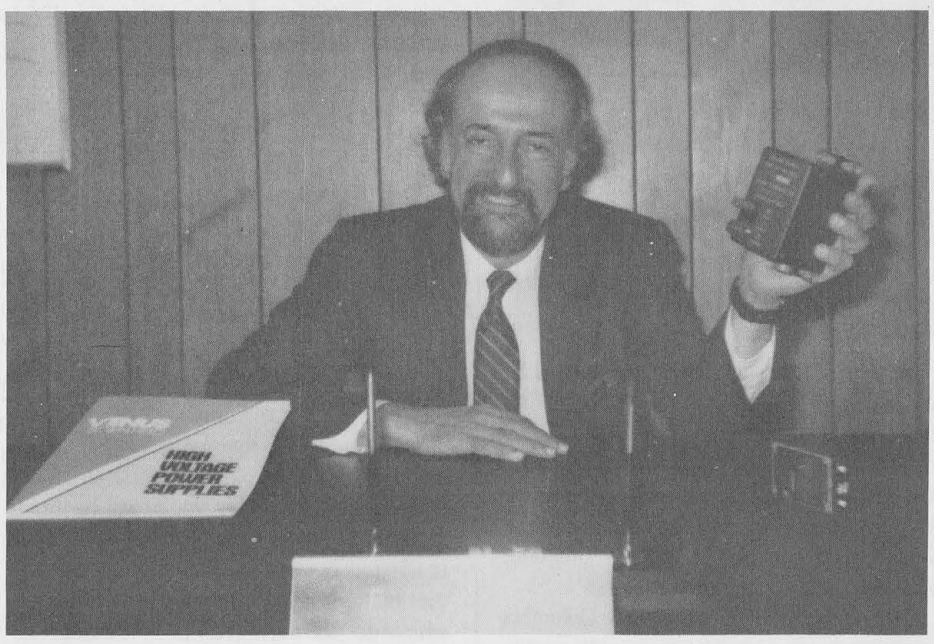
Venus' miniature supplies are used mostly to power high-resolution graphic displays in the computers carried on board military aircraft. Lately, the company has also been marketing a newly-developed product, a low-light level video camera that can produce a visible picture with as little as ten billionths of a foot-candle of light.

Filippo sees himself as an entrepreneur, and attributes his success to a variety of factors. "My accountant showed me how to run the business from an accounting point of view, my father taught me how to borrow money from banks, and I learned about manufacturing by making my product on a small scale. Because I started before the market existed in any size, I had time to grow into it, to be in place when integrated circuits created the demand."

The company has grown gradually over the years, under the founder's careful management. "I purposely chose a field where the product was difficult to make," Filippo explains, because he knew that it was precisely this kind of field in which he'd have the least competition from large corporations.

Filippo looks forward to the completion of the current, slow-moving takeover of Venus by a major corporation, so that he'll finally have time to learn to use a computer himself. "When you're in your own business," he explains, "you become so absorbed in it that after a while you know more and more about less and less."

Between 1952, when he earned the BS in electrical engineering, and 1962, he worked at the Hudson Laboratories in Dobbs Ferry, New York, and as a contract engineer for IBM, NCR, Hazeltine, General Electric, and other major corporations.




## Attilio Bisio

"There's an element of luck in every activity we undertake and a lot of hard work by many people," Engineering Advisor Attilio Bisio of Exxon Corporate Research's Technology Feasibility Center said, talking about his past accomplishments and future plans.

"What I bring to Corporate Research is a business sense, an understanding of the innovation process, and a drive to mold ideas into something usable."

A chemical engineer from the class of '53, he has lectured extensively on innovation, written a score of articles and two books, *Turning R&D into Profits* and *Gas Treating with Chemical Solvents*. He views innovation as a process where success lies in moving ideas, "usually not my own," through a large organization and into a market. "The main objective of innovation, if not all research and development activities, must be a sale." And according to Attilio accomplishing that objective means combining three critical elements—a salable idea; a team with a high degree of expertise, research discipline and dedication to the idea; and most importantly a management strongly committed to innovation.

He believes that a crucial element in the success of an idea is a team of professionals and technicians, both competent and dedicated to the success of an idea.

Before joining Corporate Research, Attilio was with Exxon Engineering and worked primarily on the development of polymer processes. At Corporate Research he has been involved in the development of THIONICS (thermoplastic elastomers), gas treating processes, and commercial applications of magnetically stabilized beds. Currently, he's at work on hydrocarbon synthesis and his third book, *Scaleup in the Chemical Process Industry.* Attilio is married to Rosemary Ronzoni Bisio, a 1954 graduate of Barnard; they have three sons.

# Columbia and Exxon: New Option for M.S. Candidates

On June 18, the New Jersey Board of Higher Education gave its formal approval to a plan under which the Columbia University School of Engineering and Applied Science will conduct a portion of its course of study leading to the master's degree in chemical engineering at Exxon Research and Engineering Company (ER&E), a wholly owned subsidiary of Exxon Corporation, headquartered at Florham Park, New Jersey.

"When Exxon proposed this idea, we were delighted," commented Robert A. Gross, dean of the School of Engineering and Applied Science. "It is an important step in helping to build better bridges between industry and the University."

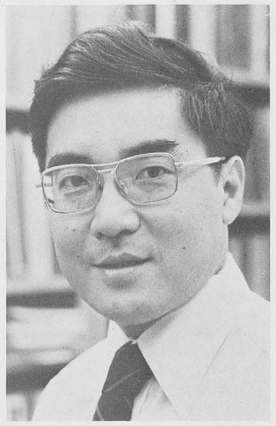
Vice dean Ralph J. Schwarz, who conceived the program and has developed it over the past two years, said, "We at the University must consider new modes of graduate education to meet the needs for continuing education of engineers. This program represents a move in the right direction."

R.C. Goree, ER&E's manager of employee relations, said, "We welcome this opportunity to establish a master of science program with Columbia University. We expect it will serve as a model during our continuing dialogue with New Jersey-based universities."

Columbia's master of science program requires the completion of at least 30 points of graduate course work, ordinarily taken at the University campus in New York City. Under the terms of this new arrangement, however, candidates for the master's degree in chemical engineering have the option of earning up to 18 credits at ER&E's Education Center in East Hanover, New Jersey. The master's courses offered at ER&E's Education Center will include regular Columbia courses taught by Columbia faculty and will award up to 9 points of credit for Exxon's own graduate courses in chemical engineering. Exxon currently offers 45 non-degree graduate engineering courses to its employees, to help them keep up-to-date and effective in their work. These courses, taught by Exxon employees and outside personnel, serve approximately 3,500 ER&E and affiliate engineers and technical personnel, among them about 500 chemical engineers.

To qualify for Columbia credit, Exxon's courses and their instructors must first be approved by the faculty of the School of Engineering and Applied Science, according to the standard procedures for approval of Columbia engineering courses and instructors. At least 70% of the overall program will be taught by Columbia University faculty.

Students registered through this new program will be subject to the same admission standards and academic requirements as Columbia's 900 other graduate students in engineering. The program will be monitored by the standing Committee on Instruction of the School of Engineering and Applied Science, and by a joint monitoring committee composed of Columbia and Exxon representatives.



# Cheh Named to Ruben-Viele Chair

Huk Yuk Cheh, professor of chemical engineering and chairman of the Department of Chemical Engineering and Applied Chemistry in the School of Engineering and Applied Science has been named the Samuel Ruben-Peter G. Viele Professor of Electrochemistry, effective July 1, 1982. The chair was established in May of this year, by a gift from the Duracell International Inc. subsidiary of Dart & Kraft, Inc., to honor inventor Samuel Ruben and Duracell's former president, Peter G. Viele, a 1954 graduate of the School of Engineering and Applied Science.

Born in Shanghai, China, in 1939, Professor Cheh earned the B.A.Sc. in chemical engineering from the University of Ottawa in 1962, and the Ph.D. from the University of California at Berkeley in 1967. He spent three years as a technical staff member at Bell Laboratories before coming to Columbia as an assistant professor in 1970. He became an associate professor in 1973 and a full professor in 1979. From January to June of 1977, Professor Cheh was Visiting Research Profesor at the National Psing Hua University in Taiwan.

A highly respected electrochemist, Professor Cheh is editor of the Electrodeposition Division in the Journal of the Electrochemical Society. More than fifty of his articles have appeared in the Journal of Electroanalytical Chemistry, the Journal of the Electrochemical Society, Physics of Fluids, the International Journal of Heat and Mass Transfer, the American Institute of Chemical Engineers Journal, Industrial Engineering Chemistry Fundamentals, the Journal of Applied Electrochemistry, and other publications. Professor Cheh has delivered plenary lectures at several national and international symposia on electrochemistry, has been an advisor to the National Science Foundation's Division of Chemical and Process Engineering, and has served as director of the NSF's chemical processes program. He is also a consultant to a number of industrial concerns.

Professor Cheh is a member of the New York Academy of Sciences, the American Institute of Chemical Engineering, the Electrochemical Society, and the American Electroplater's Society. He received the 1981 Urey Award of the Phi Lambda Epsilon Honor Society.

# Cipolla Scholarship Created

A new scholarship named for Richard H. Cipolla '43 was awarded for the first time this fall. The Richard H. Cipolla Memorial Scholarship Fund was established last winter by a $25,000 gift from the Joseph Klingenstein Charitable Trust to honor the College and Engineering School graduate who passed away in June of 1981.

The scholarship is designated for Columbia undergraduates from Colorado, with preference given to freshmen, engineers, and residents of the Grand Junction area. Louise Cabot Cipolla, widow of the late alumnus, chose this year's recipients, Eric Fountaine Block and Gary Joseph Salvucci, both College freshmen from Denver, from a group of candidates recommended by the University.

Richard H. Cipolla was general manager for the PABCO division of Louisiana Pacific, a director of the Affiliated Fruita Bank, and a longtime resident of Grand Junction. Formerly a vice president of Johns-Manville's Celite division, a group vice president for Purolator, Inc., and a manager at R.M. Hollingshead and Metcalf & Eddy, Mr. Cipolla was an avid tennis player and active community member.

The scholarship is a particularly fitting memorial, according to Mrs. Cipolla, because "years back it interested my husband. He was a very loyal alumnus, interested in helping his school." Cipolla Scholars will recieve an average annual award of $1,500.

# Attacking Hazardous Wastes

A new process to destroy hazardous wastes is being developed at the School of Engineering and Applied Science by researchers using a high-temperature method first invented to produce alternative fuels.

Called Toxiplex, the process is a variant of the Simplex Coal and Biomass Gasification Process, developed at Columbia by Helmut Schulz, adjunct professor and senior research associate at the School of Engineering and Applied Science. The Simplex process combines municipal wastes with coal to form briquettes that can be converted at blast furnace temperatures into a pollutant-free, inexpensive fuel gas.

Toxiplex will use the Simplex gasifiers, which attain temperatures of 3,000 degrees Fahrenheit, to destroy hazardous organic wastes such as polychlorinated biphenyls (PCB's) and turn toxic heavy metals found in industrial and sanitary sludges into a glassy, harmless sand useful as a road-building material. The process is being developed at Columbia's Fossil Energy Laboratory with a grant of $255,000 from the U.S. Environmental Protection Agency.

The toxic heavy metals present in industrial waste and sanitary sludge will be introduced into the Simplex gasifier in the prefabricated briquettes that are an essential part of the Simplex system. The toxic metals, which do not burn even at 3,000 degrees, will become trapped in the silica-aluminum slag that is withdrawn from the bottom of the gasifier. Encasement in the slag makes the wastes harmless. "Upon quenching the slag in a water bath, it forms a glassy sand that can be employed as a road-building aggregate without contaminating the ground water supply," according to Dr. Schulz.

Experience has shown that the landfill method of disposing of hazardous waste materials "is no longer acceptable because of the consequent contamination of ground water supplies and the potential of recycling these poisons into the food chain," Dr. Schulz said. "Conventional incineration does not assure total destruction of these materials, and the toxic metals in incinerator residues are subject to leaching into the water table."

The Toxiplex project, formally titled "Adaptation of the Simplex Process to the Destruction of Hazardous Organic Waste Materials and the Encapsulation of Toxic Heavy Metals in a Nonleachable Matrix," is being conducted by Dr. Schulz with the support of two professors of chemical engineering and applied chemistry, Jordan L. Spencer and Huk Yuk Cheh, the Samuel Ruben-Peter G. Viele Professor of Electrochemistry.

The Simplex system, now fully developed, was tested successfully last year by the U.S. Bureau of Mines and is being considered for demonstration in commercial coal gasifiers in Germany and Scotland, Dr. Schulz has reported. A study will be made of the economic feasibility of converting part of the 2,900 megawatt generating capacity of the Astoria, N.Y., plant of the Consolidated Edison Company from imported oil to Simplex gas. "Were the entire Astoria plant converted to Simplex gas," Dr. Schulz noted, "it would consume all solid wastes and sewage sludge generated by New York City."

# King's College on the Heights

Have you ever wanted to step back in time, perhaps to visit Columbia in its very early days, when a dozen or so students sipped sherry together in leather-upholstered chairs somewhere in lower Manhattan?

You can get a taste of 18th century Columbia—and 18th century New York society—in the King's College Room, a walk-in replica located in Low Library. This modest-sized but very elegant room houses a host of treasures, among them a Rembrandt Peale miniature of Alexander Hamilton, Samuel Johnson's desk, George III sherry glasses and McKim, Mead, and White's scale model of the first King's College buildings. Furnishings, decor, and even the books on their shelves are 18th century originals.

Donated to the University in 1960 by Engineering alumnus Edmund Astley Prentis '06 and his wife and daughter, the King's College Room is open from 9 a.m. to 5 p.m., Monday through Friday, and by special arrangement. It may be reached by entering the Columbiana Library, room 204 in Low. If you'd like more information or want to arrange a special visit, call Paul Palmer, the Columbiana librarian, at 280-3786.



# FACULTY NEWS

## Applied Physics and Nuclear Engineering

Professor C.K. Chu spent four weeks early last summer teaching a course in numerical fluid dynamics at the Chinese Academy of Sciences in Peking. In August, he presented an invited paper, "Simulation of Plasma Formation and Attainment of Equilibrium," at the IMACS (International Association for Mathematics and Computers in Simulation) World Congress on System Simulation and Scientific Computation in Montreal. Professor Chu served as rapporteur for a session on high-beta plasma physics studies at the September International Conference on Plasma Physics and Controlled Nuclear Fusion Research, sponsored by the International Atomic Energy Agency.

Professor Shayne Johnston presented an invited oral paper, "Practical Analysis of Power Spectra," at the 1982 International Conference on Plasma Physics, held in Goteborg, Sweden last June.

## Chemical Engineering and Applied Chemistry

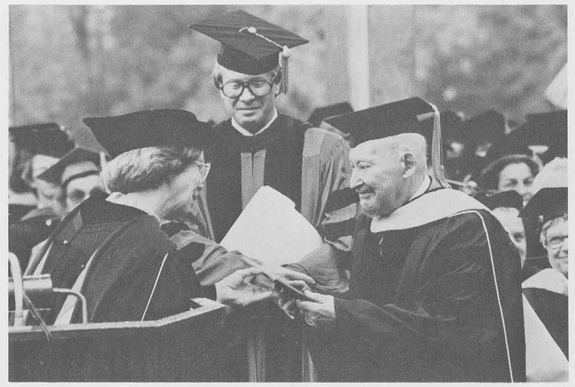
Sixty industry, government and academic experts from around the world gathered at Columbia this summer for *Desalination Technology 1982*, an off-the-record meeting cosponsored by the International Desalination and Environmental Association and the U.S. Office of Water Research & Technology for the purpose of pinpointing major issues facing the desalination industry. Research associate Robert Bakish directed the annual meeting, as he did in 1981. Among the discussants was Professor Harry Gregor, who also served as faculty advisor to the meeting.

## Civil Engineering and Engineering Mechanics

Alexander H-D Cheng, a specialist in fluid mechanics, joined the faculty as assistant professor this fall. Professor Cheng earned the B.S. degree in civil engineering at the National Taiwan University in Taipei, Republic of China in 1974, the M.S. at the University of Missouri at Columbia in 1978, and the Ph.D. at Cornell University in 1981. Most recently he has taught advanced fluid mechanics and hydraulic engineering as a visiting professor in Cornell University's School of Civil and Environmental Engineering.

## Computer Science

Rodney Farrow, Gerald Leitner, and Kathleen McKeown joined the department this fall, as assistant professors.



*At Mount Holyoke's 1982 Commencement, our own Professor Emeritus of Electrical Engineering, Sergei Alexander Schelkunoff (right), is awarded an honorary degree by Mount Holyoke's President, Elizabeth T. Kenna (left), while Dean of Faculty Joseph Ellis looks on.*

Rodney Farrow earned his B.A., M.A., and Ph.D. in mathematical sciences at Rice University, in 1974, 1976, and 1977, respectively. He has worked for the Intel Corporation of Santa Clara, California since 1977, first as a senior software engineer and later as staff engineer. Since June 1981 he has also been an adjunct lecturer at Santa Clara University.

Gerald Leitner earned the Diplom-Ingenieur in technical mathematics in 1976, from the Technical University of Graz, Austria, and the M.S. in 1978 and Ph.D. in 1982 from the University of California at Los Angeles. He has done consulting work for Siemens Corporation of Munich, Germany and TECSI-Software of Paris, France.

Kathleen McKeown received her A.B. in comparative literature from Brown University in 1976, and her M.S. and Ph.D. in computer and information science from the University of Pennsylvania, in 1979 and 1982 respectively. Her research interests are in artificial intelligence, natural language processing and generation, and computer graphics.

The department has also appointed three visiting assistant professors for the 1982-83 academic year: Zvi Galil of Tel Aviv University's School of Mathematical Sciences, and Krizysztof Sikorski and Grzegorz Wasilkowski of the University of Warsaw.

## Electrical Engineering

Cyril Harris, Charles Batchelor Professor of Electrical Engineering and Professor of Architecture, was the subject of a six-page "Personality" feature in the July 1980 issue of *Discover*. The article explored Professor Harris' career in acoustical design of auditoriums, focusing on his role as acoustician in the recent renovation of the New York State Theater at Lincoln Center.

Sergei Alexander Schelkunoff, professor emeritus of electrical engineering, received an honorary Doctor of Science Degree from Mount Holyoke College at their 1982 commencement for his work as a teacher and inventor and his devotion to higher education. A quote from the citation: "For several generations of college and postgraduate students, you made the world of mathematics and electrical engineering take on new meaning as you shared with them your own creative approach to learning, and your classic text, *Applied Mathematics for Engineers and Scientists*, became their Bible."

Dr. Schelkunoff was born in Samara, Russia. He received his A.B. and M.A. degrees from Washington State University where he was elected to Phi Beta Kappa, and his Ph.D. from Columbia in 1929. A member of the technical staff of Bell Laboratories until 1956, when he returned to Columbia to assume full-time teaching responsibilities, he was awarded fourteen patents for inventions related to guided wave transmission and antenna systems.

## Industrial Engineering and Operations Research

Donald Goldfarb and Michael Pinedo joined the faculty in September 1982, the former as professor and the latter as assistant professor.

Professor Goldfarb earned his B.Ch.E. at Cornell University in 1963, his M.A. in 1965 and Ph.D. in 1966, both in chemical engineering, at Princeton University. He has been a visiting professor at Cornell's Department of Computer Science and School of Operations Research and Industrial Engineering, and both professor and department chairman in the City College of New York's computer science department. Professor Goldfarb has also taught and researched at IBM's T.J. Watson Research Laboratories and New York Scientific Center, served as an adjunct assistant professor at New York University and as assistant research scientist at the Courant Institute of Mathematical Sciences.

Michael Pinedo earned the Ir. degree in mechanical engineering from Delft University of Technology in 1973, and the M.S. and Ph.D. in operations research from the University of California at Berkeley, in 1975 and 1978 respectively. He has taught at the Instituto Venezolano de Investigaciones Cientificas, the Instituto de Estudios Superiores de Administracion, and most recently at the Georgia Institute of Technology's School of Industrial and Systems Engineering.

## Mechanical Engineering

Rene Chevray recently joined the department as professor. He received his B.S. in 1962 from the University of Toulouse, France, his M.S. in 1964 and Ph.D. in 1967 from the University of Iowa, and his Sc.D. in 1978 from the University Claude Bernard in Lyons, France. He served as a postdoctoral fellow at the Johns Hopkins University and as professor and acting chairman of the mechanical engineering department at the State University of New York at Stony Brook. Professor Chevray has been a visiting professor at the Universities of Tokyo, Hokkaido, Karlsruhe, and Lyon, and has done extensive work in turbulence.

## Henry Krumb School of Mines

As part of Columbia's enhanced oil recovery research program, sponsored by ten major oil companies, Professor P. Somasundaran held the sponsors' annual meeting last July, on the subject of adsorption from flooding solutions in porous media. Speakers at the day-long meeting included Associate Professor of Chemical Engineering Carl Gryte, Professor Somasundaran, and industry researchers. Professor Somasundaran was recently appointed to the Chemical and Process Advisory Committee of the National Science Foundation.

# Lions Roared And Won!

Columbia's varsity teams enjoyed their most successful season of Ivy League competition last year, recording the third highest winning percentage in the league, behind Princeton and Harvard.

Against Ivy opponents, the eight Lion teams that compete in league play won 39, lost 26 and tied one for a winning percentage of .598. The mark surpasses the Lions' previous best of .586, set four years earlier.

The Lions compiled the record on the way to league championships in soccer and wrestling, and second place finishes in basketball and fencing. Columbia's winning percentage against Ivy foes was the most improved in the league, 98 points higher than the previous year.

Against all opponents, the 13 varsity teams won 104, lost 83 and tied five for a .555 percentage, second best ever, and fourth best in the league. In 1978–79, the teams posted an overall percentage of .560.

**Recognition Dinner:** *Last May, Kenneth A. Roe, chairman of the Columbia Engineering Fund, hosted a dinner at Faculty House on the Morningside campus, to thank the Dean's Associates for their munificence to the School of Engineering and Applied Science. (Dean's Associates are individuals who contribute $1,250 or more to the Fund each year.) At the dinner, Dean Gross talked briefly about the future of the School and the importance of alumni support, and each honored guest received an elegant certificate of membership in the Associates. Above, Ken Roe receives his certificate from Martha Wheat Sussman, Director of Development and Alumni Relations.*


# ALUMNI TIMES

The *Engineering Alumni times* is published four times a year by the Office of Development and Alumni Relations, School of Engineering and Applied Science, Columbia University.

Randi Jaffe, *editor, assistant director for public relations/publications*

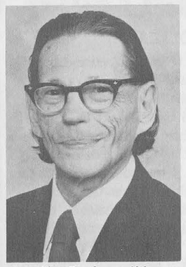
Robert A. Gross, *dean*

Martha Wheat Sussman, *director of development and alumni relations*

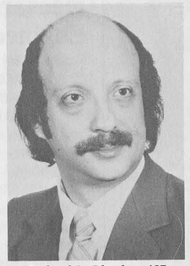
John C. Rock, *assistant director for development*

Helen J. Eckelman, *assistant director for alumni relations*

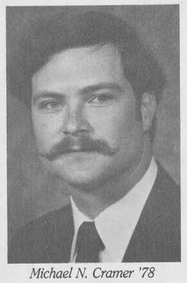
# ALUMNI BRIEFS



*Alan Beerbower '36*



*Richard D. Blomberg '67*



*Michael N. Cramer '78*

**1911**
GEORGE P. KUTZMIER reports that while most people were celebrating the beginning of the new year, he was celebrating the beginning of his 95th. Mr. Kutzmier turned 94 in January.

**1914**
LEO ROON wants to let his fellow alumni know that although he would like to attend Homecoming this year, he is not traveling much these days and will not be able to come. Mr. Roon celebrated his 90th birthday this past summer.

EDWARD I. WILLIAMS marked the beginning of his tenth decade this spring with a 90th birthday party in Washington, D.C.

**1928**
JOHN E. DINGWELL, 86 and a retired U.S. Navy captain, is living in Maryland.

WALTER C. EBERLIN is now living in a retirement home in Delaware.

**1936**
ALAN BEERBOWER, a research engineer at the University of California at San Diego, was elected chairman of Committee F-7 on Aerospace Industry Methods of ASTM. He is a member of the American Chemical Society (emeritus), the American Institute of Chemical Engineers, and the holder of 41 U.S. patents.

GIOVANNI F. MAROTTA received a medal of merit in appreciation of his support for the Republican Presidential Task Force. Mr. Marotta, a member of the task force, retired from the Con Edison Co. of New York, instrument control division, in 1977.

**1939**
SAUL RICKLIN retired in October from the position of chairman of the board at Dixon Industries Corp. However, he remains there as part-time consultant while serving on the boards of three Rhode Island companies, a Japanese company and the Foundation for Repertory Theatre in Providence.

**1943**
ROBERT L. SWIGGETT was recently elected Director of Cray Research, Inc.

**1947**
ALVIN H. ELLIOTT has just completed 35 years with Pullman Power Products Corp. and reports that he is "still single!!!"

**1948**
ALLEN W. DAWSON, of Hickory, North Carolina, recently began his third year as chairman of the board of directors of Siecor Corp.

FREDERICK I. LEVINE has been certified a Patent Attorney by the U.S. Patent and Trademark Office. In addition to his legal practice, he continues as president of Reliance Plastic & Chemical Corp., Paterson, New Jersey.

DAVID NOVICK has been named a vice president of Parsons, Brinckerhoff, Quade & Douglas, Inc. and has been awarded Parsons' Senior Professional Associates title for technical excellence. He was recently appointed chairman of the transportation and urban development group for the Philadelphia section of the ASCE.

**1949**
THOMAS E. COOK was recently elected to his third term as president of the Northern Business & Professional Association in Columbus, Ohio. Mr. Cook is now associated with Philip E. Absi & Associates, Consulting Engineers, where he specializes in process and equipment design of adsorption systems for volatile organic compounds.

CARL J. FUCCELLA was named a senior vice president of Heidrick and Struggles, Inc., in April of 1982.

CHARLES N. MARAVELL chairman, Petrogulf Oil & Refining, Ltd., was awarded an Alumni Federation Medal, the highest honor given by Columbia University alumni, at the Federation's 1982 Commencement Day Luncheon. The awards, established in 1933, are given for "conspicuous alumni service."

**1950**
FRANK BACKER, who now resides in Leukerbad, Switzerland, has been engaged in chemicals consulting work for the past three years, working extensively in the developing countries of the Middle East and East Africa.

*Joseph Gilbert '50*

*Kenneth Harris '64*

*Ilan Kaufthal '69*

RICHARD A. FREUND was awarded the 1981 Shewhart Medal, presented by the American Society for Quality Control for his outstanding contributions to the profession of quality control through development of analytical and control techniques, industrial applications, educational and professional services, and standards activities. Mr. Freund is senior staff consultant, quality assurance, for the management services division of Eastman Kodak Co.

JOSEPH GILBERT, executive vice president of the Society of Automotive Engineers, has been elected president of FISITA, the International Federation of Automobile Engineering Societies. Mr. Gilbert has been with SAE for 35 years and has served in his current position for the past 21 years.

**1951**
ELLIS W. DEIBLER, JR. writes "I am a missionary, plain and simple, and I live on a missionary's income, which is also rather plain and simple . . . but I wouldn't swap with anyone . . . I have the most exciting, most challenging, most fulfilling work." Mr. Deibler is a linguist who has been working in Papua, New Guinea for "some twenty years."

LOUIS G. SILANO has been appointed director of major structures at Parsons, Brinckerhoff.

**1952**
JOHN W. MURPHY was elected to the new post of group vice president at Sprague Electric Co. Before joining Sprague in 1972, Mr. Murphy had been director of operations at Beckton Dickinson.

**1953**
SHELDON WEINIG, presidnent of Materials Research Corp., recently travelled to Japan where he addressed the Tokyo Chamber of Commerce. Speaking before a luncheon gathering of Japanese and American businessmen, he tried to ease some of the apprehension which is darkening the future of joint business interests between the United States and Japan.


*The photo above was taken at an intimate 65th anniversary class reunion at the home of Hugo Kladivko (right) in Boundbrook, New Jersey. Kladivko cooked a gourmet dinner for classmates Isador Silverman and Hugo Loesch, from the Engineering School class of 1917.*

**1955**
ANDREW W. WERTH, senior vice president of M/A-COM DCC, was elected a fellow of the Institute of Electrical and Electronics Engineers, "for leadership in the design and development of digital satellite communications systems."

**1957**
RAY LAUTERBACH was appointed vice president and general manager of Maloney Pipeline Products Co., and thus ended twelve years with Geosource where he most recently served as vice president of marketing for the Smith Systems division.

WILLIAM LONG has completed 25 years of service with Foster Wheeler Energy Corp. Mr. Long, who is a member of the American Society of Civil Engineers and holder of several patents, resides in Chester, New Jersey, with his wife and 5 children.

SAMUEL R. PULFORD has been named director of advanced systems programs at IBM's Federal Systems division in Owego, New York. He has been with IBM since 1959, most recently as manager of advanced systems.

**1958**
EDWIN M. DROGIN was presented with the "Best Paper" award by the 1982 National Aerospace and Electronics Conference for his co-authorship of "High-speed Data Link Concepts for Military Aircraft." Mr. Drogin is an electrical engineer at the Eaton Corporation's AIL division and a senior member of the IEEE.

MARVIN M. SPECTER, managing partner of M.M. Specter, P.E., L.S. in White Plains, New York, was installed as president of the National Society of Professional Engineers in July of 1982. He has served the New York State Society of Professional Engineers as national director and as president of its Westchester chapter.

**1960**
MELVIN BERNSTEIN has been appointed head of the department of metallurgical engineering and materials science at Carnegie Institute of Technology, the engineering college of Carnegie-Mellon University.

JAMES V. TOTO, a partner at Dames & Moore, was named general manager of the firm's northeastern U.S. operations. He will direct regional client services, marketing activities, and personnel in 20 northeastern states.

**1963**
ALLEN PLOTKIN, a professor in the department of aerospace engineering at the University of Maryland, received the 1981 Engineering Sciences Award of the Washington, D.C. Academy of Sciences.

**1964**
KENNETH HARRIS has been promoted to senior vice president for finance and operations support for the W.R. Grace Restaurant Co. He and his wife, Maureen, an actress, presently reside in Beverly Hills, California.

MARK J. SPAHN is vice president of MAXIMUS, Inc., a technical consulting firm in McLean, Virginia. In his spare time he referees for his sons' (David, 11, and Aaron, 8) soccer program, plays tennis and enjoys microcomputing.



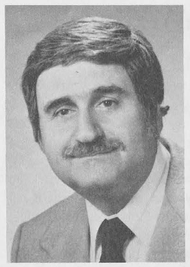
**1967**
RICHARD D. BLOMBERG, president of the eastern division of Dunlap and Associates, Inc., has been elected chairman of Committee F-22 on High-Visibility Materials for Individual Safety of ASTM. In addition to membership in ASTM, Mr. Blomberg is a member of Alpha Pi Mu, the Association for Consumer Research, Operations Research Society of America, Tau Beta Pi and the Transportation Research Board.

CAROL M. COLUCCI reports that she received her registration as a professional engineer in the state of California, on February 17, 1982.

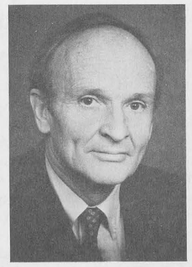
BERNIE STRAUSS returned from a visit to the Swedish Steel Industry as Gulf Oil's metallurgical liaison. The trip, sponsored by the Swedish government, included a tour of seven steel companies in central Sweden.

**1969**
ILAN KAUFTHAL has been named vice president for finance and treasurer of NL Industries, Inc. He joined the company in 1970.

ROBERT S. PILTCH is now program manager in operations planning evaluation and control for the Department of Sanitation of the City of New York.



*Frederick I. Levine '48*



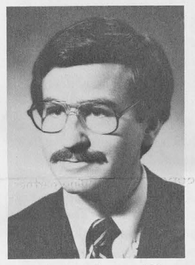
*William Long '57*

*Samuel R. Pulford '57*

JAMES C. HUAG became a faculty member at the U.S. Navy's Civil Engineer Corps Officer School, in Port Hueneme, California.

**1971**
ERDAL YILDIRIM was appointed to the new position of manager-oil sands technology in Cities Service Co.'s alternate fuels division. A native of Turkey, he joined Cities Service in 1972 after 15 years of experience in mining engineering and research.

**1973**
ORHAN KURAL reports from Turkey that he earned his Ph.D. at the University of Istanbul in 1978. From October '81 to July '82, he was a research assistant at the Technical University of Aachen in West Germany.



*Alan M. Silberstein '69*

*James V. Toto '60*

*Erdal Yildirim '71*

ALAN M. SILBERSTEIN is now senior vice president in the operations division of Chemical Bank, managing the bank's check and credit card operations. He became vice president in 1976 and director of profit planning for the corporation in 1978.

**1970**
RICHARD C. INSINGA recently joined the United Technologies Research Center in East Hartford, Connecticut, as research marketing manager.

**1975**
MICHAEL S. KATZ was appointed principal at Booz, Allen & Hamilton. Mr. Katz is eastern region personnel manager and a member of Booz, Allen's information systems practice.

**1977**
DANIEL A. POTASH is managing director of Abrahamson & Company. His own software firm provides analytical financial models and database services to investment banks, commercial banking and corporations. He writes that he "would like to meet other Columbia engineer-entrepreneurs."

**1978**
MICHAEL N. CRAMER has been elected vice president in the metals and mining group of the industry specialists department at Manufacturers Hanover Trust. He has been with the bank since 1979.

FELICIA A. PLESIC reports that after four years at General Atomic Co., she has decided to continue her education as a graduate student at Iowa State.

STUART A. STEIN is employed by the Maxwell House Division of General Foods and is presently doing in-house developmental research for their Houston manufacturing facility.

**1981**
ELI M. HAUSER received an M.S. degree in electrical engineering at Northeastern University in June and began working in the analog device technology group of MIT's Lincoln Laboratories in August.

PAXTON J. LOUIS writes that he is "on the road and traveling" for Stone & Webster Engineering Corp.

**1982**
JEFFREY A. ISAACSON has been selected to receive a fellowship from the U.S. Department of Energy's magnetic fusion energy technology fellowship program. Through the fellowship, he will enter a master's degree program at Princeton University, and during his first year will participate in a practical work experience at a DOE-designated R&D center.

JAMES C. REINISH is now working for the Port Authority of New York and New Jersey in the operations standards department.

ARTHUR SUN is working towards his master's degree in electrical engineering, at Columbia.

## In Memoriam

**1910**
Homer Carr

**1911**
William E. Buchtenkirk

**1912**
Arthur W. Thomas

**1913**
Edward H. Koenig
Jacquin D. Phillips

**1915**
William M. Springer

**1916**
Herman Grossman

**1923**
Francis A. Lennon

**1924**
Karl Fritz Eilers

**1925**
William N. Angus
Raoul G. Bergman

**1927**
E.B. Guernsey

**1928**
Norman Buddine

**1930**
Victor Sheshunoff

**1933**
Albert L. Perley

**1938**
Dominic J. Bressi

**1940**
Julius Ashkin

**1942**
Everard A. Elledge

**1944**
A. Robin Mowlem

**1945**
John J. Most

**1947**
Walter E. Hakanson

**1949**
Ronald V. Lints

**1951**
Harold J. Tiedemann

**1977**
Mannathazath S.H. Menon

# Lou Silbert: Contracting to Contracts

After 35 years in the contracting business, Lou Silbert '47 is starting a new career. He's going to law school.

"I've always been interested in the law, but as a young man starting out in the world, I had a speech defect that prevented me from pursuing this path. Now that's behind me," said Lou in a recent interview, "and this seems to be the right time to go ahead."

A variety of factors helped him decide to begin studying law now. With the 1982 liquidation of Kensil Hedeman Co., a contracting firm he founded with Jack Hedeman '48 in 1953, he and his wife Elaine Abrams Silbert moved to lower Manhattan. "With the children (Glenn Silbert '75 and Laurie Silbert Lowe) grown, we no longer had the need for a large house, and we wanted to be closer to the cultural center. I took a job with the city, examining contract claims for the Bureau of Engineering in the Office of the Comptroller. Then, when I realized I was living and working right around the corner from New York Law School, I thought, 'Let's fulfill all those unfulfilled dreams.'"

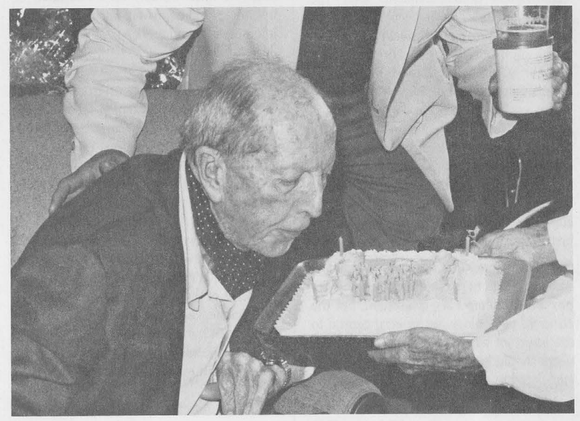
And so Lou Silbert began his part-time study of law with the fall '82 semester. So far, it's just as engaging and fulfilling as he'd hoped it would be.

As for his job with the NYC Comptroller, it's "rewarding—not financially, but in all other respects." And the task of negotiating contractor's claims is one he's "very comfortable with," having done competitive bid public contracting in the New York City area for so many years.

Of all the schools, firehouses, hospitals and other municipal buildings he's worked on, the one Lou recalls as most outstanding was a mechanized cow barn for New York State's agricultural college in Farmingdale, Long Island. The barn was equipped with automatic manure- and feed-handling equipment as well as milking machines, and Lou explains that while building it he acquired an appreciation of the completeness of the life cycles.

Watching the barn take shape, he saw that the manure went into the fields where corn was growing, that corn went into a silo where feed was made, that cows ate the feed and produced not only more manure, but milk as well. "I learned a lot about life from that contract," he said.

We wish him the best in his new life.



**Ninety Years Strong:** *Edward I. Williams '14, who rowed #3 in 1914's championship crew, celebrated his 90th birthday with a party at son Edward Jr.'s home in Washington, D.C. Among his guests was James Howard Purdy '14 College, also a nonagenarian, who was crew manager in that championship season.*

# Engineers on Engineering

## Arthur S. Dwight '85

. . . Remember that you are entering upon the practice of a noble profession that contains within itself the widest opportunities for honorable achievement. Seek to develop the spiritual side of that profession, to understand its ideals, and to maintain its standards of ethics and conduct. You can of course get a job and win a certain degree of success and prosperity by merely using the mental equipment that you have here been taught to employ; but it has lately come to be more and more evident that the engineer has a higher mission to perform than that of a mere technologist. He occupies a position of trust and of great responsibility, with opportunities to render substantial benefits to his community, to the State and to the Nation, and particularly since the Great War, there has been among the engineers an awakening to their obligations in this direction. The idea of *service to others* is the keynote of this newly awakened spirit.

You men of Columbia should not be neglectful of this side of your profession. Miss no opportunity to align yourselves with the best elements of your profession . . . . The engineers form a world-wide brotherhood, singularly free from the jealousies which often beset some of the other professions. You will make many delightful friendships and establish ties with engineers in the far-away places of the earth and will ever find the older men ready to help you with counsel when you need it, or otherwise help smooth the way for you. The profit you will gain from this relationship will be the greater the more you yourself put into it.

I need not remind you of the pleasure and duty which is yours to keep in touch with your own school, and help pass on to the men who follow you some of the inspiration which you have drawn from the fountainhead.

*—from an address delivered at Commencement, 1923.*

## S. Benedict Levin '33

I note with interest the enrollment pressures and the financial pressures being felt by the School; and I note with satisfaction the positive approach which the School and the University are taking to cope with the forces of the contemporary scene. Columbia does indeed have a continuing obligation to provide superior education and research. But I hope that Columbia will do more. I hope that we will teach the young that not everything we *can* do is *worth* doing; that our technological accomplishments over the past four decades have been stupendous, and have improved the quality of life in many ways; but that some of them have brought pain and fear and misery and untimely death. I hope that we will tell the young engineers with candor that man is more advanced in science and technology than he is in the ways of living together with compassion and justice and love, in harmony with our environment; and that we can not with impunity allow our material cupidity to blind us to the meaning of the first and second laws of thermodynamics.

Yes, I am aware that it is the responsibility of the College to teach ethics and philosophy and contemporary civilization, but the ethics of technology are so *very* central to the future of mankind that would-be engineers should be thoroughly and repeatedly stimulated to and by thought in that field.

*—in response to Dean Gross' February 1982 circular letter to the alumni.*

## The Honorable Herbert C. Hoover

As a profession, engineering has both joys and sorrows.

The engineer has the fascination of watching a figment of his imagination emerge with the aid of science to a plan on paper. Then it moves to realization in cement, metal or energy. Then it brings new jobs and homes to men. Then it adds to the security and comfort of these homes. That is the engineer's high privilege among professions.

The profession, however, does have woes. [The engineer's] work is out in the open where all men can see it. If he makes a mistake, he cannot, like the doctor, bury it in a grave. He cannot, like the architect, obscure it by trees and ivy. He cannot, like the lawyers, blame it on the judge or jury. He cannot, like the politician, claim his constituents demanded it. Nor can he, like the public official, change the name of it and hope the voters will forget. Unlike the clergyman, he cannot blame it on the devil.

Worse still, if his works do not work, he is damned. That is the phantasmagoria which haunts his nights and dogs his days. He goes to bed wondering where the bugs are which will inevitably appear to jolt its performance. He awakens at night in a cold sweat and puts something on paper that looks silly in the morning.

And the world mostly forgets the name of the engineer who did it. The credit goes to some fellow who used other people's money to pay for it. But the engineer, himself, looks back at the unending stream of goodness that flows from his successes with a satisfaction that few other professions can know.

* * *

The training of engineers instills character in those who would join its ranks. High ethical standards are the essential of all professions, engineering included. Technology without intellectual honesty does not work. Construction without consciousness soon crumbles.

* * *

The job of the engineer is to take the discoveries of pure science and convert them into use for the good of mankind. To this end he needs laboratories.

At one time we got our inventions from the genius in the garret. Poverty, however, does not clarify thought. Nor does it provide a laboratory. Bread-and-butter diet has been discarded as the mother of invention. Today these gifts come from long years of organized search and experiment. Therefrom, like the cell-by-cell growth of plants, fact builds upon fact until there comes forth the blossom of discovery, the illuminating hypothesis or the great generalization. And finally it finds fruition of a multitude of inventions and improvements in living. And it increases the power of a people to pay government debts.

This reminds me that there is one road to rapid recovery of the nation from our present burden of rearmament. That is to increase our productive power by new technologies and new inventions.

And there are spiritual consequences of research. From them comes the unfolding of beauty, the ever-widening boundaries of thought. Here is the invocation of veracity of thought in a world sodden with intellectual dishonesty. From its discoveries comes the lifting of men's minds beyond the depressing incidents of the day. Here is confirmation of a Supreme Guidance in the Universe far above man himself.

Today the nation needs more and more research and more and more engineers.

*—from remarks made at the opening of the Columbia University Engineering Center Campaign, in 1951.*

## General William Barclay Parsons '82

Law, medicine and theology were formerly the only recognized professions. Engineering has not only elbowed its way into this select and highly respectable group but it has almost, and perhaps somewhat rudely, crowded the others into distinctly restricted places. Today man turns to the original three only when he finds himself in trouble, and perhaps not even then to religion, but from the products of engineering he is never out of touch. He cannot escape them, even if he would. He rises in the morning and opening a tap in his bathroom draws a copious supply of water that has been raised by a great pump or conducted by a long aqueduct. He eats his breakfast cooked on an electric stove whose energy comes from a waterfall many miles away. He takes a motor vehicle to a railway station and thence a train drawn by a steam locomotive to the city. In his office while his letters are being written on a machine he transacts his business by wire across the continent or over the ocean without any wire at all. He reads of people flying through the air, not always it is true without jeopardy, or of others navigating a boat under the sea. In the evening he attends the theatre to witness a mechanically produced version of Shakespeare in pictures, or listens to a concert which by turning a knob he catches from the air, and then goes to his bed whose comfortable springs are the product of modern metallurgical methods. Not one of these and similar facilities, today an inseparable part of our living, existed one hundred years ago, few are older than fifty years, and some not more than five.

No span of one hundred years in all history can show social and economic changes in the least comparable with those wrought in the hundred years just past, and these changes are the direct outcome of engineering.

*—from an address given at the inaugural meeting of the Columbia Chapter of ASCE, in 1927.*

## Admiral Hyman G. Rickover '29

I have long believed that we should come appreciably closer to a humanistic technology if engineering were practiced as a humanistic profession and if engineers were accorded the professional independence granted members of liberal professions. Engineers would then find it possible to act with the same sense of professional responsibility and service to humanity that is characteristic of good physicians.

Professional independence is not a special privilege but rather an inner necessity for the true professional man; it is also a safeguard for his employer and for the public. It is what chiefly sets him apart from the skilled technician.

This independence of professional judgement has not been accorded the engineer. He still has to win it for himself. It can happen that an experienced engineer's professional judgement will be overrruled by a lay superior, while no one would think of dictating to a physician. Yet the university-trained engineer is as competent a professional in his field as is the physician.

*—from "A Humanistic Technology," an address presented in Low Library on April 13, 1982.*

## Samuel Ruben

Inventors today are recognized by society as a factor in the progress of our civilization. This was not always so, for the inventors who initiated the beginning of the industrial revolution were treated with suspicion and hostility, often by the very people who in the long run benefited by their efforts.

This was particularly highlighted by violence in mass reaction in England and France with the introduction of textile machinery. Kay, the inventor of the flying shuttle, was mobbed when he introduced his invention in Lancashire. A mob destroyed the spinning frame invented by Hargrave. Crampton, the inventor of the spinning mule, hid it for fear of a similar fate. Jacquard barely escaped being drowned in the Rhone by angry weavers on account of his new loom. In Nottingham there were riots on the introduction of the stocking loom. Today the climate is different and sometimes the inventor is afforded recognition and honors, particularly if the product of his efforts results in widespread acceptance. The growth of industries is dependent upon invention and innovation, for one reads in company statements that some of their major revenue producers were not in existence 20 years ago.

We have come to take inventions for granted, and the beginnings of many have been forgotten in the dimmed vision of time . . . .

In general, progress has always required creative thinking and a determined effort in the pursuit of bold dreams, however imaginative. Goals become reality only when ideas are complemented by a working technology.

The most important factor that an imaginative individual is endowed with is an inner sense of direction. The effectiveness of this inner sense of direction requires the understanding of a concept in relation to the existing science and technology. This involves the planning and practical embodiment of the imagined concept and persistence in order to bring it to effective realization as a real world invention.

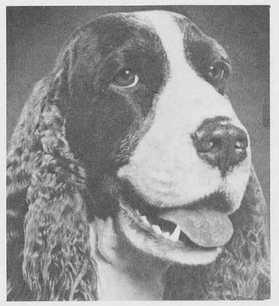
To translate an imaginative concept into practice in the light of today's technology, the investigator must accumulate a very broad mental storage of the facts of science and technology by continuous study and experience. In the particular field in which I have been engaged during the past fifty-five years, I have found exceptionally important mental tools in my early recognition of the importance of the science of materials and more specifically in later years, in the analytic study of the periodic table of the elements and their electron configurations with relation to the properties of compounds.

The systematic extension of information that is the nature of science provides the knowledge from which, in suitable "translations," technology has acquired the substance of its explosive growth. Modern science has given the inventor an increasing supply of mental tools with which to compose his imaginative concepts and has provided him with the key to translate them into practical reality. An essential result of the growth of science will be an increasing number of new products invented by those best trained in the complex of scientific thought that is the basis of technology. The number and quality of these inventions will depend, to a certain extent, upon the amount of encouragement given to engineering students to combine independent thinking about new products with the basic scientific knowledge they are acquiring.

*—from "Inventors and Society," a spring 1981 Armstrong Memorial Lecture, sponsored by the Department of Electrical Engineering.*

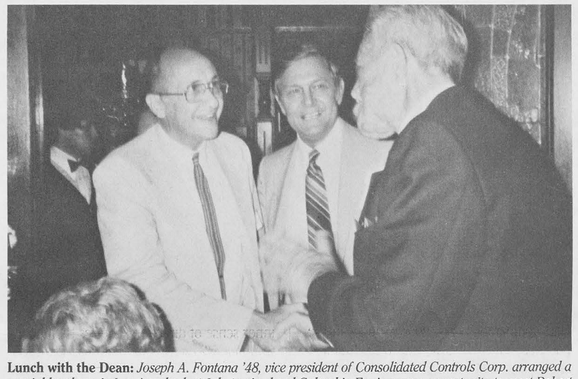


# A Dog's Life



While Richard H. Wilson '48 toils every day at AT&T headquarters in Manhattan, another member of his family poses for ads, acts in TV commercials and occasionally even models for a dog food package. Dog food package? Well, yes. Dick and Sue Wilson have an 8-year-old English springer spaniel, Pogo, who's appeared on television in support of such varied sponsors as Crest toothpaste, Gravy Train and Alpo dog foods, the American Field Service, and Ivory soap. He's also appeared on the cover of *Popular Mechanics*, on packages of Milk-Bones and Purina Dog Chow, and in a New England Life ad that ran in *Time* and *Newsweek*. When he is not on camera, Pogo shows his stuff in obedience exhibitions at nursing homes, nursery schools, hospitals and local (Westchester) events, as a proud member of the Port Chester, NY, Obedience Training Club. He is also on a relay racing team, and participated in the Regional Superdog Obedience trial in Maryland last spring.

Pogo, whose proper name is Canarch Fun and Games, has been earning his board and keep since he was six months old. His predecessor in the Wilson household, Chessie, used to appear on *Captain Kangaroo*, though her first job was "sitting all afternoon in a bathtub full of soapsuds while a little red-haired boy scrubbed her. "She loved it!" says Sue Wilson, resident dog trainer. Sue and Dick have already brought home a new springer who'll someday succeed Pogo—Charlie, now in his eleventh month. Clearly, the Wilsons like raising celebrity springers, but do they have any beefs about show biz? Only one: "Animals don't get residuals, which we think is beastly."



**Lunch with the Dean:** *Joseph A. Fontana '48, vice president of Consolidated Controls Corp. arranged a special luncheon in Los Angeles last July to give local Columbia Engineers an opportunity to meet Robert A. Gross, dean of the School of Engineering and Applied Science. Above, Dean Gross exchanges greetings with Jerry Sokolski '36, as Joe Fontana looks on.*

# Camp Columbia Reunion

For the second year in a row, overflow crowds arrived at Camp Columbia this summer to sample the fun, games, and friendliness.

The cool August weather made for vigorous games of softball, volleyball, and tennis, while strong winds kept most would-be canoers off Bantam Lake. Bird-watchers spotted more than 40 species on the annual Sunday morning hike, and the ping pong, bridge, and poker players played on and on all weekend.

Among this year's special guests were Dean Robert A. Gross, who proved himself quite admirably on the tennis courts, and Dean Emeritus Wesley Hennessy. In addition, there was a large contingent from the classes of '54 and '55—Phil Bonnano, Joel Dolin, Gunnar Harstead, Tom Palamenghi, and Ted Paterson—who spent an undergraduate summer in camp, building the roads that are now in use. Professor Emeritus of Physical Education Richard G. Waite, who still describes himself as Camp Columbia's bartender, came up to visit with the road crew; he was their supervisor that summer.

As always, rain threatened from time to time, but it never actually hit in large enough doses (douses?) to damage the playing fields or dampen the spirits of our hearty 125-plus campers.

## Former Campers, take note!

If you have any old photographs, notebooks, or other memorabilia relating to Camp Columbia, Associate Dean Howard Vreeland would very much like to see them. Dean Vreeland is collecting Camp memorabilia in preparation for the 1984 Camp Columbia Centennial Celebration. You may reach him by mail at the School of Engineering and Applied Science, Room 540 Mudd, Columbia University, New York NY 10027, or by phone at 212-280-2981.

# The Engineering Boutique

Show your loyalty to Columbia Engineering and your pride in your degree! The following Engineering School gift items are available by mail order:

### Sportswear for many occasions

Columbia Engineering sweatshirts come long-sleeved and navy blue, in a comfortable 50% cotton/50% polyester blend, adult sizes S,M,L,XL: $17.
The short-sleeved version of the Columbia Engineering sweatshirt is Columbia baby blue, 50% cotton/50% acrylic, adult sizes S,M,L,XL: $15

Our white T-shirt has navy ribbed neck and sleeve bands, and a navy crown with crossed hammers encircled by the words "Columbia Engineering." 75% cotton/25% polyester T-shirt comes in adult sizes S,M,L,XL: $8 and children's sizes 6-8, 10-12, 14-16: $6

New! Camp Columbia Reunion T-shirts, 100% cotton in beige with forest green lettering and reproduction of the Camp tower. Also in 50% cotton/50% polyester, white with navy trim and insignia or navy with white. S,M,L,XL: $8

Also, "I survived Camp Columbia . . . and enjoyed it!" T-shirt in light blue 100% cotton, green or red 50/50 cotton/polyester, all with white lettering, S,M,L,XL: $8

Don't get caught without a visor when the sun shines on your side of the court! Attractive green plastic sun visor embossed with gold crown and crossed hammers, woven straw headband and trim. One size fits all: $2

### Engineering outerwear

Navy blue nylon, fully lined windbreaker with 2 patch pockets, white crown with crossed hammers. S,M,L,XL: $30
With name embroidered on jacket front: $31

Bright blue vinyl hooded rain poncho with white insignia and trim. One size fits all: $8

### Get organized

Use a midnight blue Columbia Engineering folder, with 2 inside pockets, heavy plastic finish. Design matches that on coffee mug: $1.25

### Entertain yourself and your guests Columbia-style

Ten-ounce crystal cocktail glasses bear a blue crown with crossed hammers: $4

Midnight blue porcelain coffee mug, with contemporary design using the words "Columbia Engineering": $7.50

Pewter ash trays, molded with the School insignia: $4

Plastic-coated playing cards, in red or blue with white crown and hammers. Per deck: $4

### Bag it!

Our sturdy, heavyweight, nylon book bag doubles as an athletic tote. It's bright blue with white webbing handles and Engineering School insignia, and pockets for calculators, pens, etc.: $20

### School ties for men and women

Our own attractive school tie, made for us by Givenchy, in navy or burgundy woven silk and polyester with white overall pattern of crown and crossed hammers. Women's style: $13, Men's: $20

### Need a yearbook?

We've uncovered a limited supply of yearbooks, for the following classes:
'58, '59, '60, '62, '63, '67, '71, '78, '79: $10
'80 and '81: $15

**To: Office of Development and Alumni Relations**
164 Engineering Terrace
Columbia University
New York, N.Y. 10027

Please send me the following Columbia Engineering souvenirs:

Item_____ Size_____ Price _____
Item_____ Size_____ Price _____
Item_____ Size_____ Price _____
Item_____ Size_____ Price _____

Total cost _____
Postage and handling charge $2.50
Additional charge for UPS or airmail delivery $3.00
Total amount due _____

My check, payable to Columbia University, is enclosed.

Name_____
Address _____
_____ Zip_____

# The Dean and the Dorm

*by Robert A. and Elee K. Gross*

On Friday, December 11, 1981, we spent our first night in the faculty-in-residence apartment in East Campus. First impressions tend to become etched in memory, and on that evening we recall that there was a light snowfall. The campus looked white, beautiful, and quiet. That is, until about 2:00 a.m. when some joyful shouting from students having a snowball fight under our window woke us both. We *really* took up campus living in mid-January, at the start of the spring term, by moving thirty-six boxes of clothing, books, and miscellaneous articles from our house in New Rochelle. Our Westchester home is a large, old, colonial-style house filled with warm and good memories of twenty-one years during which we raised two sons. Since our sons are now married, we were interested in becoming more involved in the stimulating cultural life that takes place at Columbia. Why not live right on campus? When we told our sons that we would be living in a Columbia dormitory, they reacted as if we had lost our sanity.

What is it like to live on campus in a large student dorm-complex? The East Campus faculty-in-residence apartment was designed by the architectural firm of Gwathmey and Siegel, and the apartment design was developed by Joel Bargmann and David Steinman, with some suggestions by us. The interior is gray and white, clean, modern, uncluttered, and somewhat stark. Large windows admit full sunlight into the living room and dining room. The first floor is large enough for us to entertain about forty people without being too crowded. The second floor contains two bedrooms. The apartment is four floors above the East Campus entrance—yes, we walk up.

Our introduction to life in East Campus was made much easier by a superb group of student resident counselors. Under Jane McDonald, assistant dean of Columbia College, they are responsible for maintaining order and solving the varied problems of daily living. The ten counselors, with Leslie Lo, head resident, were our first guests. They came on a Sunday evening at the conclusion of the Superbowl game and helped us create a list of faculty whom we subsequently asked to become East Campus faculty associates. Since then, we have held weekly East Campus affairs; Professor Ted deBary and the Society of Fellows in the Humanities were the focus of our first. Both we and the students learned something about how professional scholars in the humanities conduct their research.

Later that night two students rang our doorbell and presented us with the results of their first attempt at bread baking—quite good. All the apartments and suites in East Campus have cooking facilities, and occasionally Elee is called on as a consultant to students who are having a first try at a new recipe.

In the ensuing two months we had a reception for East Campus students to meet the faculty associates. Karl-Ludwig Selig, professor of Spanish, has talked with us about why he reads novels. Engineering professors Carl Gryte and Bob Bill, Jr., talked about acid rain and what might be done about it.

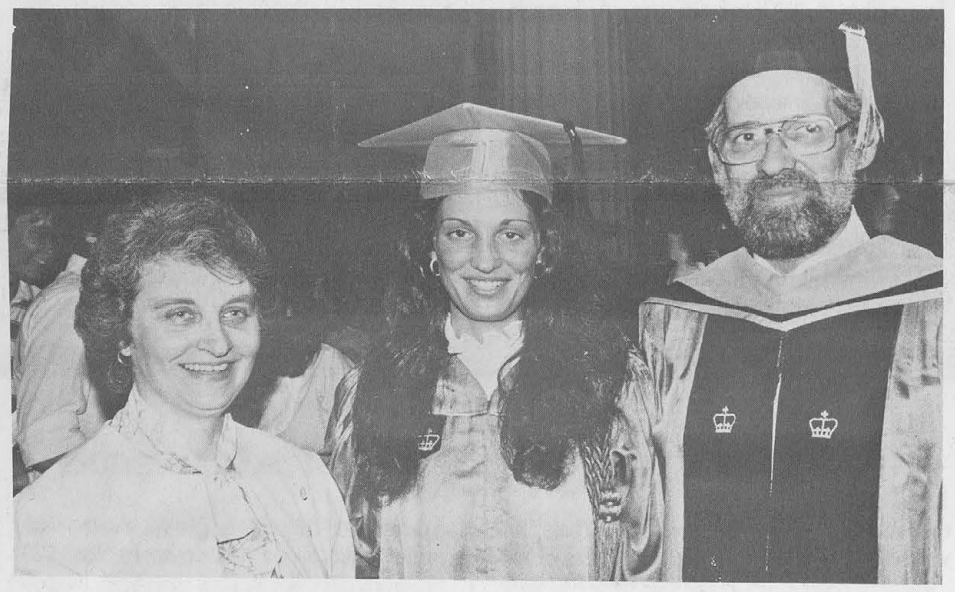
Our apartment has occasionally served as a place of respite and change of scenery for students who want a coffee-and-cake break from studying for exams. We have had the East Campus senior football players to dinner; and the Engineering Dean's List students met with us for a coffee hour. We have had, among other guests for informal talks with the students, football coach Bob Naso, Admiral Hyman Rickover, and actor Tony Randall.

East Campus is the home for 650 students who are attending Columbia College, Engineering, and Law, including about one hundred women. We find living here stimulating, and the many campus activities often make a very long day for both of us. To our surprise, we find the apartment quiet. The students have respected our privacy and we find them very good neighbors. We haven't been bothered by false fire alarms, but we do share that problem common to dorm-dwellers—nearly being scalded when taking a shower just as someone along the line flushes. Early in the morning we wave to students who come to their windows in the high-rise as we are having breakfast.

Our apartment in East Campus doesn't feel like home yet, and perhaps it never will. Although the faculty-in-residence role is a lot of work, on the whole it is fun and at times exciting, and our experiences here are enriching our lives.

# Commencement 1982

**Right:** *The class of '82, 233 strong, applauds University President Michael I. Sovern. Class Day speakers also included Dean Robert A. Gross, Dean James F. Parker, Class President James C. Reinish, salutatorian Robert Scarmozzino and valedictorian Thomas D. Shepard.* **Lower right:** *Three generations of a Columbia family posed for this portrait on Commencement Day 1982. Robert I. Cowen, '21C, '22E is seated; his son Robert Cowen, Jr. '51C, '52E stands at right beside his son, David Cowen '82C. Robert, Sr. and Robert, Jr. are chemical engineers; David, a chemistry major, is planning a law career. Robert, Sr.'s wife, Ida, attended Teacher's College and the School of General Studies; his brother, Dr. David Cowen '28C, '32P&S is a neuropathologist at P&S.* **Below:** *Teresa Testa '82, flanked by her mom, Joan Testa, and dad, Professor of Civil Engineering Rene B. Testa '60, shows her best Commencement smile.*





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## Fall Events

| | |
|---|---|
| **October 14** | Thomas Egleston Dinner<br>Low Library Rotunda |
| **October 26** | Engineering Council Meeting<br>12:00 noon, The Princeton Club, NYC |
| **October 29–31** | Arden House Weekend<br>Harriman NY |
| **November 8** | Campaign for Columbia begins |
| **November 18** | Engineering Affiliates Conference<br>"VLSI Fabrication of Microstructures"<br>Kellogg Conference Center,<br>International Affairs Building |
| **December 14** | CESAA Board of Managers Meeting<br>6:00 p.m. Room 520 Mudd |

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