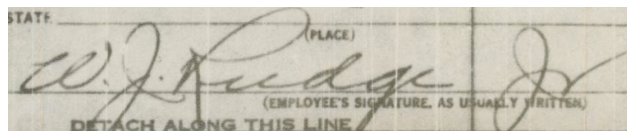


# 7<sup>th</sup> Generation



William Jerome Rudge Jr. (1902-1972)



**Photo:** This is a photo his wife prominently displayed of William Jerome Rudge Jr.in her cottage for many years.

**Signature:** Taken from William Jerome Rudge Jr.'s application for a Social Security Number on 24 Nov 1936.

## SEVENTH GENERATION

7. **WILLIAM JEROME<sup>7</sup> RUDGE JR.** (William John<sup>6</sup>, John William<sup>5</sup>, John<sup>4</sup>, William<sup>3</sup>, Samuel<sup>2</sup>, William<sup>1</sup>) was born in Monroe, Union Co. NC on 26 May 1902 [1]. He died of acute respiratory failure and chronic obstructive pulmonary disease at the Hillcrest Hospital, Pittsfield, Berkshire Co. MA on 30 Oct 1972 [2]. His remains were cremated [3]. He was trained as an electrical engineer and worked in the Lightning Arrester and Cutout Engineering Division of General Electric in Pittsfield, Berkshire Co. MA. He was ultimately promoted in 1964 to manager of engineering for the Distribution Protective Equipment Department. He was raised a Presbyterian, but as an adult referred to himself as agnostic [4, 58].

He married **LENA ANNE WYSS**, daughter of Alfred and Susanne nee Bieri Wyss, at First Methodist Church in Pittsfield, Berkshire Co., MA on 24 Mar 1930 [5, 6]. She went by the name “Anne” starting in the summer of 1929, about the time she first met her future husband. She was born in Lowell, Vergennes Co. MI on 12 Feb 1902 and died of pneumonia at the Edgecombe Nursing Home in Lenox, Berkshire Co. MA on 18 Feb 1993 [7, 8]. Her remains were cremated and scattered in the back yard at their cottage in Lenox. A memorial marker commemorating both their lives is located in the Mountain View Cemetery, Lenox, Berkshire Co. MA.

### *His name*

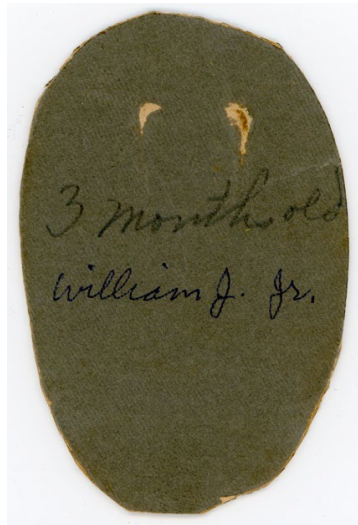
William Jerome Rudge Jr.’s middle name was given to him in honor of his mother’s step uncle, Jerome Dowd, who attended Trinity College (now Duke University) and later became a prominent professor of sociology at the University of Oklahoma [9]. During his youth he is consistently identified as going by the name “William,” “Master William” or “William Jr.” [10, 11, 13, 18] He started referring to himself as “Bill” sometime while he attended college at Davidson and went by that name informally for the rest of his life. (It’s unclear that he was even aware that his father did not share his middle name when he named his son “William Jerome Rudge III.”) His grandchildren all referred to him affectionately as “Grandpa.”



*Jerome Dowd  
(1864-1952)*

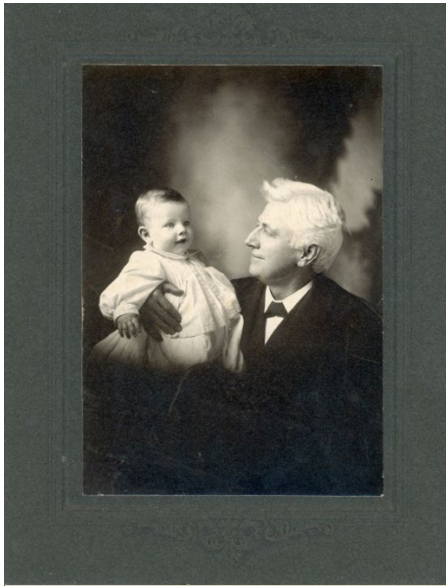


*Front*



*Back*

To the left is our earliest known photo of William Jerome Rudge Jr. Assuming the inscription on the back is accurate, it would have been taken ca. Sep 1902.



William Jerome Rudge,  
Six and a half months old  
and  
His Grandfather Adams,  
64 6/2 Months old -  
Dec. 11<sup>th</sup> 1902.



*This is a photo of William Jerome Rudge taken with his grandfather Henry Bethune Adams. The caption on the back reads "William Jerome Rudge, six and a half months old and His Grandfather Adams, 64 1/2 Months old [53 years 10 1/2 months old]. Dec. 11<sup>th</sup> 1902."*



*On the back of the left photo is written "Wm. Jerome Rudge. Two years old. "Batting the Ball" May 1904" I suspect these were taken in front of his home, which at the time would have been Cranford St.*

### Early Life

William Jerome Rudge Jr. was born and raised in Monroe, Union Co. NC, a small southern city with a total population of about 2,500 at the time of his birth. He grew up in the early twentieth century, when innovative electrical technologies (e.g. light bulbs, radios and telephones) were transforming daily life. As noted in the preceding chapter, his father, William John Rudge was a prominent businessman and the owner and proprietor of a jewelry/bookstore called the W. J. Rudge Co. His mother, Ethel Josephine nee Adams, was a music teacher.

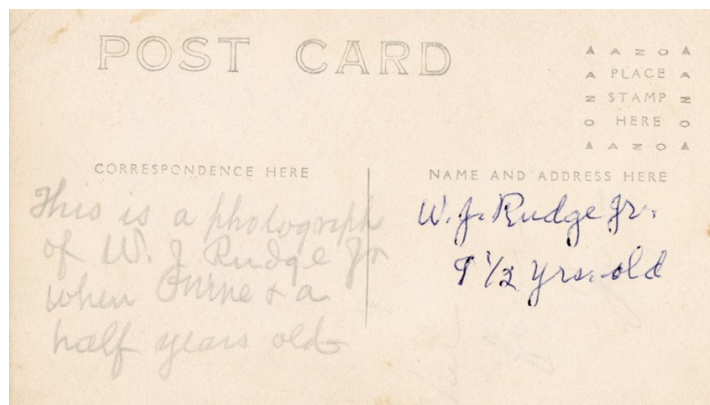


LEFT: photo of William Jerome Rudge was taken ca. Nov 1904. MIDDLE: William Jerome Rudge Jr. and his sister Fannie Person Rudge, who was born on 31 May 1906. It was probably taken in Oct 1906. RIGHT: photo of William Jerome Rudge Jr. on the right is from a postcard.

Newspaper accounts during his childhood mention his family's frequent trips to visit relatives on the Adams side of the family, including his great grandmother, Lydia Josephine nee Bruce Person Dowd (1832-1912) in Charlotte, Mecklenburg Co. NC [11]. They regularly celebrated Christmas at his uncle and aunt, Dr. William Cyrus and Nina nee Adams Houston home in Concord, Cabarrus Co. NC and vacationed each summer at the Houston's cottage in Black Mountain, Buncombe Co. NC. These visits were opportunities to camp, fish, hunt, picnic and swim [12, 75]. During the 1918 Spanish Flu epidemic he assisted as a driver and in the article is referred to as a scout [13].



Front



Back

This is a photograph on the front of a post card. On the back it reads in pencil "This is a photograph of W. J. Rudge Jr. when nine and a half years old." An inscription in ink also reads "W. J. Rudge Jr. 9 1/2 yrs. old." I recognize the latter as his wife's handwriting.

### *Violinist*

William Jerome Rudge Jr. in his youth was a skilled musician who played the violin. An article published in the Monroe Journal announces that on 28 Jan 1915 (at the age of less than 14 years old!), he took over the role of director of the six member Monroe Orchestra. The article identifies him as the violinist and suggest the band was known for playing selections of ragtime music, such as “The Memphis Blues” [14]. He was also known to give violin solos at other events, such as one of the local Music Study Club’s socials and a church event [15]. The Monroe Orchestra reorganized a few years later, with a subsequent article in 1920 now identifying him as first violinist [16]. He continued while in college [17].



### *Public School Education*

William Jerome Rudge Jr. attended the Monroe Public Schools. Newspaper accounts suggest he did very well in his studies, and regularly appeared on the Graded School Honor Roll [19].



*This is a photo of the Monroe Graded School located on Lancaster Avenue at College St. It was built ca. 1902.*



38

THE MOHISCO

FRESHMAN CLASS

Henry Adams W. J. Rudge, Jr.

*This is a photo of the freshman class in William Jerome Rudge Jr.'s high school that appeared in the 1917 Mohisco (the Monroe high school's yearbook) on p. 3*



*William Jerome Rudge Jr. is the young man facing the camera in the middle of the group of five above.*

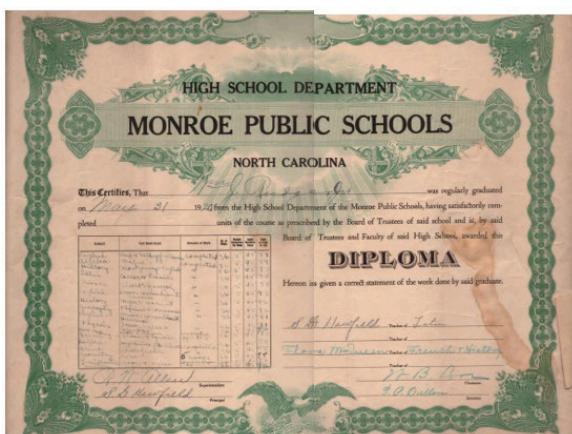


*William Jerome Rudge Jr. is the young man in each of the lower photos. All three appear to have been taken ca. 1920.*



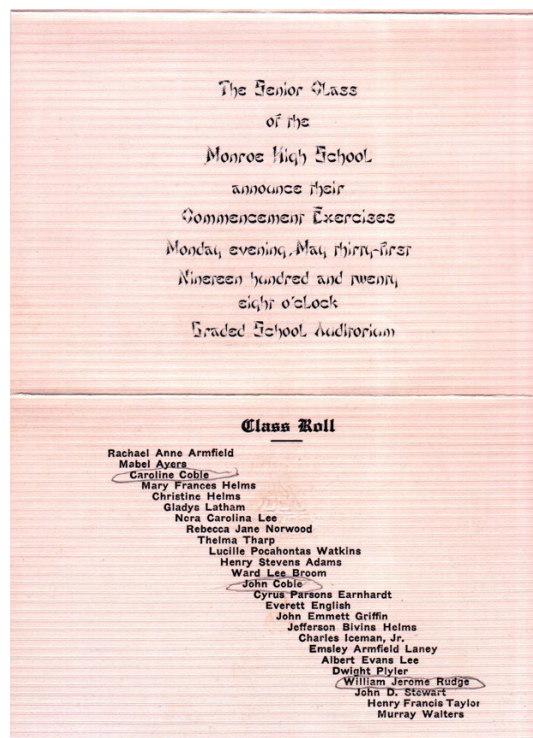


*This appears to be a photo of the Monroe High School Class of 1920. My grandfather, William Jerome Rudge jr. is in the farthest back row, the second man from the left. His cousin, Henry Stevens Adams is the first man in the second to last row on the left in front of him. I think his cousin, Caroline Virginia nee Coble Jones is the woman in the front row, second from the right. John Bunyan Coble Jr. was also part of this class. If I had to guess, I think it is the man on my grandfather's right (i.e. the leftmost person in the backrow).*



*William Jerome Rudge Jr.'s Diploma from High School.*

*His High School Commencement Exercises took place on 31 May 1920 at the Graded School Auditorium and featured a commencement address by Gov. T. W. Bickett [20]*



Subject	Text Book Used	Amount of Work	No. of Weeks	Number Recitations Per Week	Length Recitation Period	Grade on Scale of 100
English	Reed & Kellogg's Classics	Completed	36	5	45	87
Algebra	Milne's	Completed	72	5	45	89
History	Montgomery's English	"	36	5	45	78
Latin	Callan & Daniels	"	36	5	45	74
Science	Clark's General	"	36	5	45	85
English	Brooks Composition & Classics	"	36	5	45	93
History	Myer's Ancient	"	36	5	45	92
Geography	Physical & Commercial	"	36	5	45	92
English	Brooks Composition & Haller's	"	36	5	45	91
Physics	Tower, Smith & Furber	"	36	5	45	91
Book Keeping	Stal & Craig	Completed pp. 103	36	5	45	70
French	Traver & Quier	"	36	5	45	89
English	Smyth's History of Civilization	Completed	36	5	45	75
French	Charlier's	"	36	5	45	94
Geometry	Wells'	5 books	36	5	45	92
S. Arithmetic	Moore & Miner	Completed	36	5	45	92
History			36	5	45	92

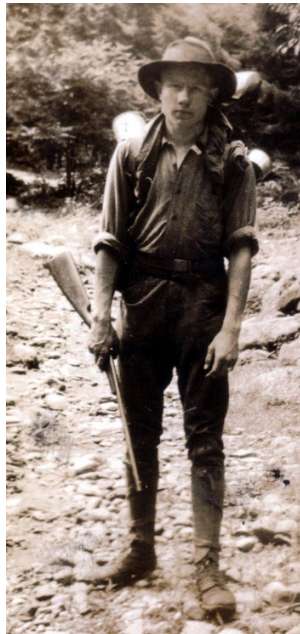
A close up of his high school diploma reveals it includes a list of the courses he took and also his grades. His education included multiple language courses (English, Latin, French), math courses (arithmetic, algebra, geometry), history, science classes (science, geography, physics) and also bookkeeping.

### College Education

After his high school graduation William Jerome Rudge Jr. attended Davidson College in Davidson, Mecklenburg Co. NC starting in the Fall of 1920 [21]. College catalogs and bulletins identify him as a member of the Class of 1923 who was pursuing a Bachelor of Science degree, presumably in physics. He did so with some financial assistance from Uncle Doctor and his wife [69, 75].



College bulletins identify William Jerome Rudge Jr. as a private in Company A of the Reserve Officer's Training Corps (ROTC) [22]. Newspaper accounts during the time he went to Davidson also mention him traveling home for the holidays [23].



*The above photographs are all taken from a scrapbook William Jerome Rudge Jr. created during the 1920s that range over his time in college through shortly after his honeymoon in 1930.*

Glee Club

During his first year in college, William Jerome Rudge Jr. became First Bass in the Davidson College Glee Club [24]. Newspaper accounts include stories of him playing violin as part of a string “actet” [octet] at a minstrel show on 27 Nov 1920 [25]. In mid Feb 1921, the Davidson Glee Club went on a six day concert tour of North Carolina as the Davidson “Wild Cat” jazz orchestra.

*“MUSICAL WILDCATS HOLD CENTER CONCERT STAGE. Davidson Collegians Delight Large Audience in College Auditorium. The ‘Wild Cat’ jazz orchestra, with its tuneful syncopations, featured the program of the Davidson College Glee club, appearing in concert before a large audience in the Auditorium at Queens college last night. The musical ‘Wild Cats’ were ‘popping out’ with pep and won continued applause with their selections. An excellent program, consisting of 13 numbers of popular college songs, quartets, and sketches was presented for nearly two hours the collegiate artists performed in pleasing style. After the concert a reception was given by the club by students of the college and faculty members. The club is touring the western part of the state, Salem college, Winston-Salem, Lexington, Asheville, and Fassifern school being the other places on the schedule... V. ‘Wildcat’ Jazz Orchestra- Law, Adams, Gibson, Rudge, Sheppard...” [26]*

**Davidson College Glee Club**  
SEASON 1920-1921

C. R. VANCE..... Leader  
C. J. MATTHEWS..... Manager  
F. N. THOMPSON..... Assistant Manager

*First Tenor*  
C. R. VANCE  
C. W. ROBINSON

*Second Tenor*  
C. J. MATTHEWS  
F. N. THOMPSON

*First Bass*  
F. W. LAW  
O. J. ALLISON

*Second Bass*  
D. P. McGEACHY

C. H. LONG  
H. MEYERS

J. H. McKEITHEN  
R. L. McLEOD

J. M. ADAMS  
W. B. CARR

J. W. PHILLIPS  
W. J. RUDGE

A. V. GIBSON  
DOUGLAS BERNHARDT

FRANCIS NORTHPROP..... Pianist  
W. P. CUMMING..... Acrobatic Expert

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DAVIDSON COLLEGE GLEE CLUB  
CONCERT AND VAUDEVILLE

SHEARER HALL  
SATURDAY AFTERNOON, 4 O'CLOCK

**PROGRAM**

C. R. Vance ..... Leader  
C. J. Matthews ..... Manager  
F. N. Thompson ..... Assistant Manager

**PERSONNEL**  
Frank Northrop, Pianist

*FIRST TENORS*  
C. H. Vance ..... H. N. Meyers  
C. H. Long ..... C. W. Robinson

*SECOND TENORS*  
F. N. Thompson ..... John Adams  
R. L. McLeod ..... H. N. McKeithen  
C. J. Matthews ..... W. B. Carr

*FIRST BASS*  
W. J. Rudge ..... F. W. Law  
O. J. Allison ..... J. W. Phillips

*SECOND BASS*  
D. P. McGeachy ..... A. V. Gibson  
Douglas Bernhardt

Acrobatic Expert ..... W. P. Cumming

I. Alma Mater ..... Chorus ..... Unknown  
II. Tell Me, Little Gypsy ..... Law and Chorus ..... Berlin  
III. When Honey Sings an Old-Time Song ..... O. J. Allison ..... Carey  
IV. Broadway Rose ..... Vance, Law, Shepherd and McGeachy ..... Maspick  
V. Mandolin and Guitar Selections ..... Steele  
VI. Dry as a Camel's Tonsils ..... Chorus

**INTERMISSION**

I. Our Castle of Dreams ..... Chorus ..... Seely  
II. Character Sketch ..... Thompson and Law ..... Selected  
III. Margie ..... Thompson and Chorus ..... Conrad  
IV. "I Love the Land of Old Black Joe" ..... Vance, Law, Shepherd and McGeachy ..... Selected  
V. "Wildcat" Jazz Orchestra ..... Law, Adams, Gibson, Rudge, Shepherd .....  
VI. Sugarfoot Gaffney and Lightnin' Rod Jones ..... Tailato  
VII. O Davidson ..... Chorus ..... Shields

Program found among William Jerome Rudge Jr.'s papers for a concert and vaudeville show that took place on 5 Mar 1921. [27]



This is a photo of the Glee Club William Jerome Rudge Jr. was a member of during his time at Davidson. He's in the front row, second from the right.

**Photography**

Sometime during his college years, William Jerome Rudge jr. began developing a life-long interest in photography, a hobby he shared with his future wife.



William Jerome Rudge Jr. taken at Monroe, NC



Trinity College (now Duke University)

William Jerome Rudge Jr. transferred to Trinity College (now Duke University) and entered as a sophomore in the fall of 1921 [28]. He was the third generation of his family to attend Trinity—he was preceded by his grandfather, Henry Bethune Adams who graduated from Trinity in 1870 (and later served as a Trustee), and also his uncle, Henry Bethune Adams Jr. who graduated from Trinity in 1904. William Jerome Rudge Jr. also holds what I suspect is a unique distinction of being the only person who can claim to be both part of the last graduating class of Trinity before it was renamed Duke (A.B. 1924) and a member of Duke’s first graduating class in 1925 (A.M. 1925). Precisely why he transferred unclear- perhaps he thought it was a better school to study physics. In any event, once there he quickly became immersed in campus life. He was initiated as a member of the Alpha Epsilon Chapter of Delta Sigma Phi on 5 Nov 1921 [29]. The local chapter was founded in 1920. He also became a member of a group of students attending Trinity from Union County, NC called the Union County Club [30].



William Jerome Rudge Jr. [31]

**The CHANTICLEER 1922**

**Union County Club**

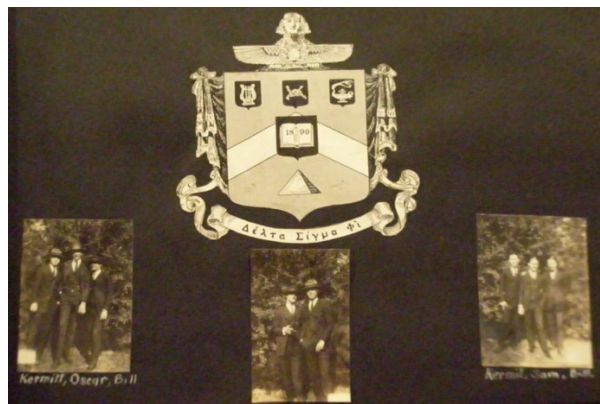
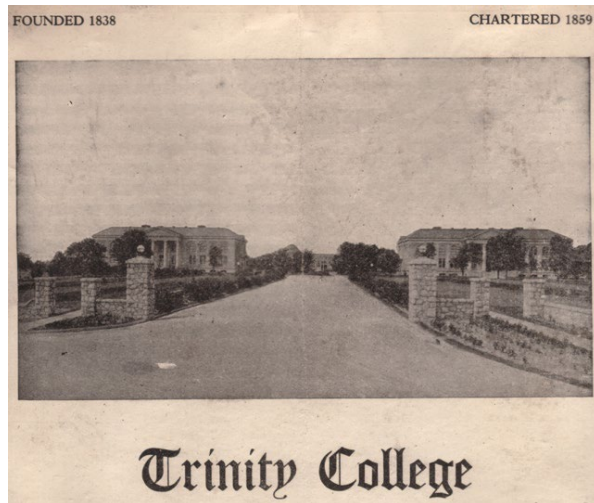
OFFICERS

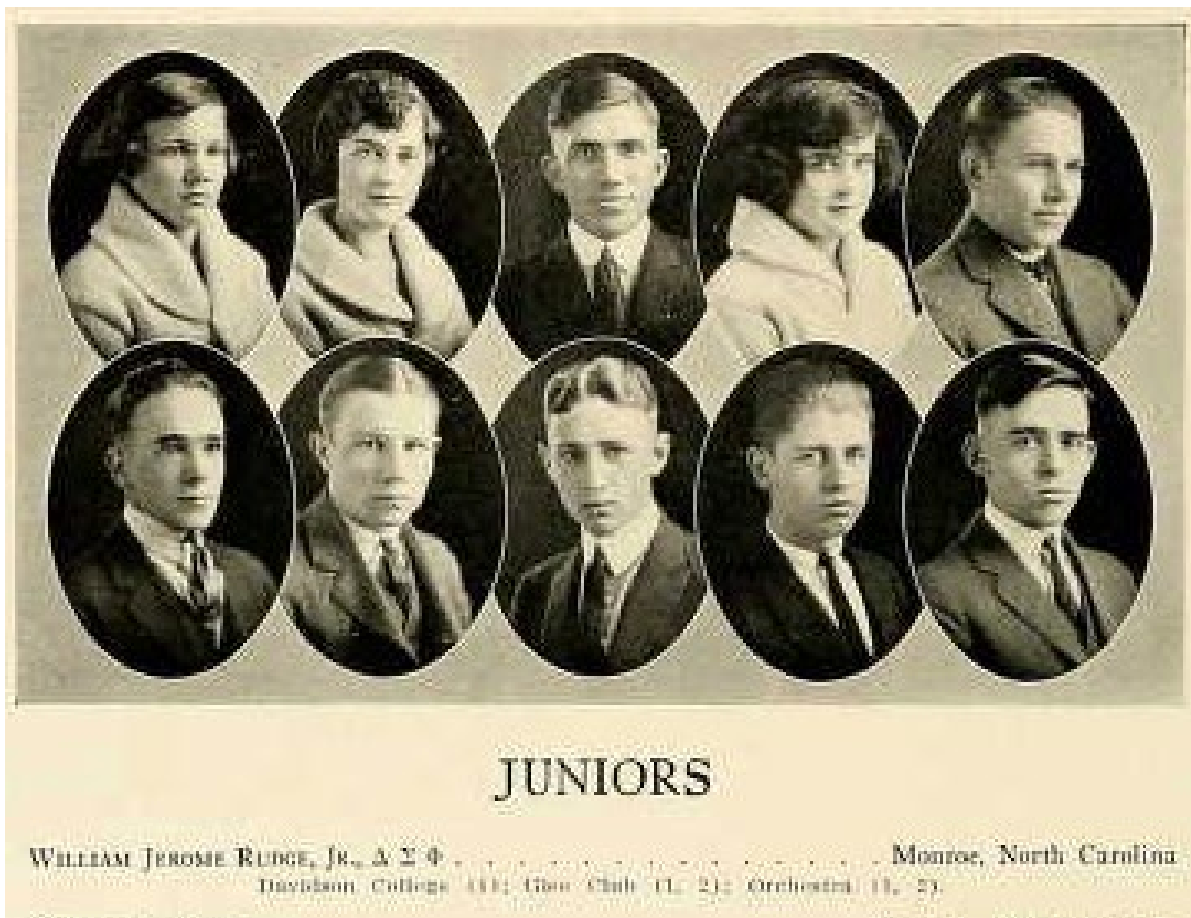
O. L. RICHARDSON		<i>President</i>
JAMES WEAVER		<i>Vice-President</i>
HENRY BELK		<i>Secretary</i>

MEMBERS

HENRY BELK	ALBERT LEE	W. J. RUDGE
G. B. CALDWELL	C. H. LEE	WILLIS SECREST
G. N. DEAL	O. L. RICHARDSON	J. R. SHUTE
EVERETTE ENGLISH		JAMES WEAVER

*One Hundred Seventy-nine*





"JUNIORS... WILLIAM JEROME RUDGE, JR. Δ Σ Φ... Monroe, North Carolina, Davidson College (1); Glee Club (1, 2); Orchestra (1, 2) "U.S. School Yearbooks, Durham, Trinity College (Duke University), *The Chanticleer* 1923, p. 108.

Glee Club & Orchestra

William Jerome Rudge Jr. is identified as a member of both the Trinity Glee Club and Orchestra in the 1923 yearbook for Trinity College (see above). (According to family tradition, he was selected as first violinist for the Trinity orchestra, but I have not been able to independently confirm this and it is possible this represents a conflation with his role in the Monroe Orchestra mentioned above.)

He was part of a Trinity Glee Club concert held at Queen College (Charlotte, Mecklenburg Co. NC) attended by his mother, aunt Miss "Pat" Martha Fletcher Adams, and his uncle and aunt, Dr. & Mrs. W. C. Houston on 21 Nov 1922 [32]. He performed the next day as a violinist for the Trinity orchestra and part of Trinity's Syncopating Seven (another musical group) in Gastonia, Union Co. NC, and again a few days later in Ashville, Union Co. NC [33]. He is named as part of two additional conferences that occurred the following spring at Mt. Olive, Wayne Co. NC and Wilmington, New Hanover Co. NC [34]. He also continued to give recitals in his hometown of Monroe, Union Co. NC [35].





*Photographs of the members of the Alpha Epsilon Chapter of Delta Sigma Phi in U.S. School Yearbooks, Durham, Trinity College (Duke University), The Chanticleer 1924, p. 262. William Jerome Rudge Jr. is the man on the left second row from the top.*



### Senior Year

References to William Jerome Rudge Jr. in his senior yearbook provide additional insight into his life while in college. It indicates he was involved in the Engineering Club and also the Young Men's Christian Association (Y.M.C.A.), which is a community-based organization that promotes mental and physical health. The entry to the right draws specific attention to his interest in thermodynamics and electrometallurgy.

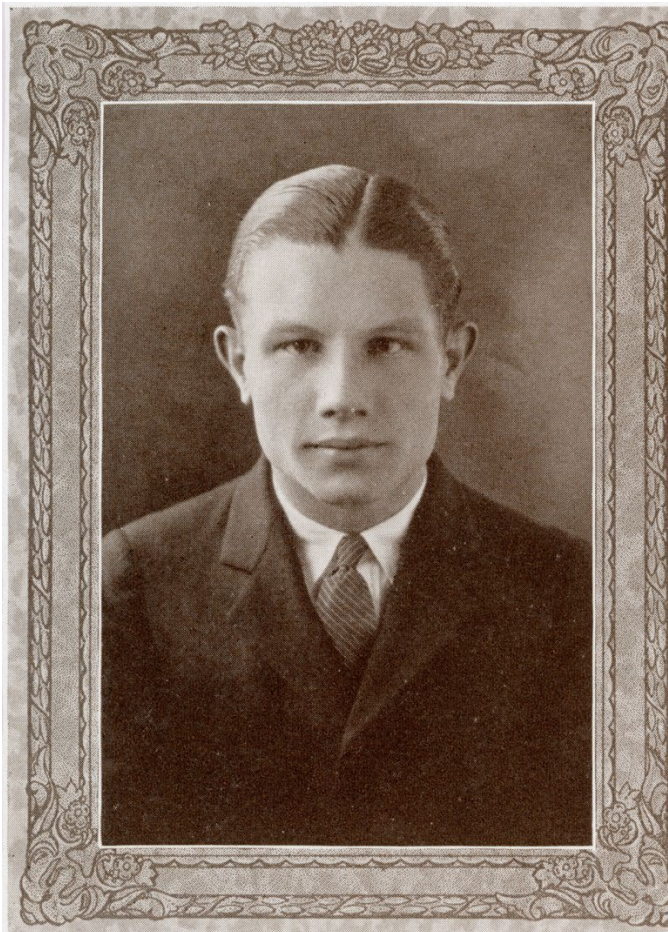
Another page of this same yearbook identifies him as one of two "acting assistants" who specialized in engineering [36]. I suspect this means he was a teaching assistant who helped students learn engineering, either as someone who assisted a faculty member in their teaching duties or perhaps as a tutor. In any event, it gives us insight into how he supported himself financially.

He participated in a mock trial on 2 May 1924 and attended Trinity's Senior Banquet on 7 May 1924 [37].

William Jerome Rudge Jr. graduated on 4 Jun 1924 from Trinity with an A.B. (Bachelor of Arts degree [38]).



*William Jerome Rudge Jr.  
ca. 1925 Monroe, NC*



WILLIAM JEROME RUDGE, JR.,  $\Delta \Sigma \Phi$   
OF  
MONROE, NORTH CAROLINA

*WHO* is interesting not because of his superior knowledge of thermodynamics and electrometallurgy, but because of his remarkable ability to play a violin. Electricity is his field, just as everybody has a special field (or is supposed to have), and he is expected to know that; but it is the overtones in his character, the special qualities outside of his regular profession, that make him unusual. "Bill" has the faculty of coupling the greatest amount of attention to his books with more social duties than any man in the class. At the latter art, "Bill" has been most successful.

Davidson College (1); Glee Club (2, 3);  
Orchestra (2, 3); Engineering Club; Y. M.  
C. A.

*U.S. School Yearbooks, Durham, Trinity College (Duke University), The Chanticleer 1924, p. 80*

*Graduate School*

The following fall, William Jerome Rudge Jr. began pursuit of a graduate degree at Duke University (formally Trinity College) in Durham, Durham Co. NC. The 1925 *Chanticleer* identifies him as a graduate student and an instructor in engineering. (His 1950 resume indicates this involved “teaching Freshman and Sophomore Mechanical Drawing, Descriptive Geometry and Engineering Problems”) He apparently continued to remain active in his fraternity and indeed is identified in the yearbook as being a member of the Fraternity Pan Hellenic Council [39]. He graduated with an A. M. (Masters of Arts) degree and attended the graduation ceremony on 10 Jun 1925, which was attended by his parents, sister and also his uncle and aunt, Dr. & Mrs. W. C. Houston [40].


**Faculty**

HEZEKIAH COTESWORTH RITTER  
*Acting Professor of Biblical Literature*  
A.B., University of South Carolina; A.M., Princeton;  
Graduate Princeton Theological Seminary; Boston University, 1923-24.

GEORGE MERRITT ROBISON  
*Assistant Professor of Mathematics*  
A.B., A.M., Ph.D., Cornell.

WILLIAM JEROME RUDGE  
*Instructor in Engineering*  
A.B., Trinity; Delta Sigma Phi.

SANFORD MEDDICK SALVER



*U.S. School Yearbooks, Durham, Duke University, The Chanticleer 1925, p. 25*



*William Jerome Rudge Jr. taken in Monroe, NC ca. 1925*



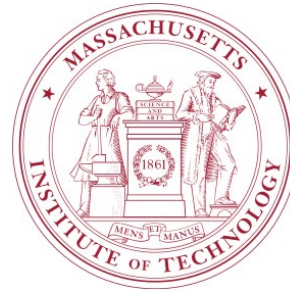
*William Jerome Rudge Jr.'s scrapbook contains multiple photos of social events he attended while in college*



*This is a photo of the Alpha Epsilon Chapter of Delta Sigma Phi at Duke University. It was taken ca. 1925 in Durham, Durham Co. NC. William Jerome Rudge Jr. is the young man in the second row from the back, second from the left.*

### Massachusetts Institute of Technology

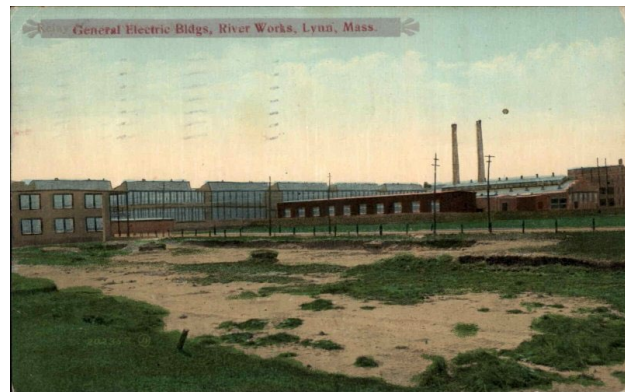
After completing his education at Duke, William Jerome Rudge Jr. decided that the best way to pursue his career as an engineer further would be to pursue graduate education at the Massachusetts Institute of Technology (M.I.T.), previously known as “Boston Tech” in Cambridge, Middlesex Co. MA [41]. He apparently was admitted without funding, and as such negotiated a loan to pay for the costs of his education with his uncle, Dr. W. C. Houston. They drew up a formal agreement, which stipulated a set interest rate of 6.5 percent, which seemed reasonable given the prevailing rate of interest on bank loans at the time. As discussed below, taking on the obligation to repay the loan at this rate turned out to be an enormously consequential decision that he would come to regret for the rest of his life (see The Problem below).



*William Jerome Rudge Jr. and his uncle, Dr. William Cyrus Houston Christmas 1929, Monroe, NC*



*William Jerome Rudge Jr. took this photo of the Dome, a well known building on M.I.T.'s campus*



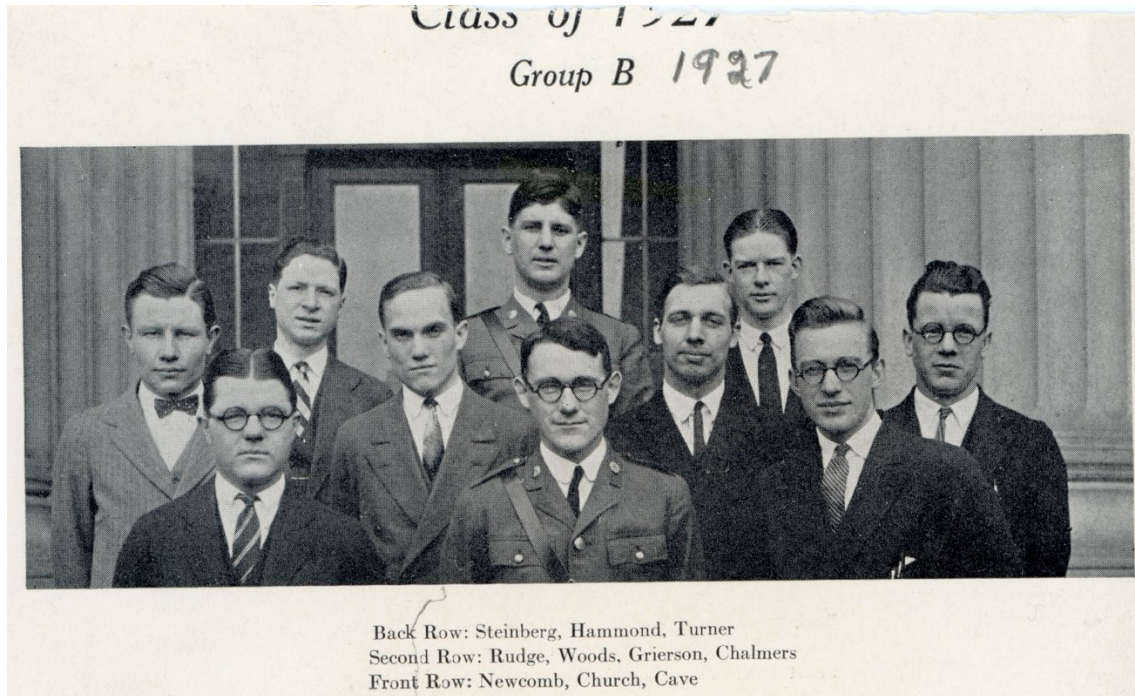
*General Electric, Lynn River Works*

### Career at General Electric while in Graduate School

On 21 Oct 1955, William Jerome Rudge Jr. delivered a twelve page talk entitled “Industrial Research & Development Engineering for More and Better Products,” to engineering alumni at Duke University. An autobiographical passage contained in that account provides a brief overview of how he came to be associated with General Electric:

When I first emerged from school, I faced the same problems that most young men leaving school today face, that is, the choice of the kind and nature of job I hoped to make my career. Fortunately, during my school term at M.I.T., after leaving Duke, I was able to take the Cooperative Course, which gave me the opportunity to work with the General Electric Company for four-month periods sandwiched in between my regular school terms. In this way I became acquainted with the work being done in the High Voltage Laboratory at Pittsfield, and later with the Lightning Arrester and Cutout Product lines, with which I am still associated. [42]

On 8 Feb 1926 William Jerome Rudge Jr. started employment at the General Electric (G.E.) Lynn River Works near Boston, MA as a test engineer [43]. He continued to work there until 4 Oct of that year, when he was transferred to Pittsfield Works. Correspondence suggests he worked in the High Voltage Engineering Laboratory. It also indicates he was part of a larger group of M.I.T. co-operative students. who pursued the opportunity in the hope that the projects they worked on for the Pittsfield Works would be suitable for thesis projects [44].



During his time at M.I.T., William Jerome Rudge Jr. lived at 117 N. Common, Lynn, Essex Co. MA in 1926, 823 North Street in Pittsfield in 1927, and still later Suite no. 202, Nichols MIT Dormitories in 1928 [45]. He shared this suite with apartment with twins: Howard O. Woods, a fellow engineering student at M.I.T. and his twin brother, Homer H., who may have been a lawyer.

*Right: The back of this photo has an inscription that reads: "In Memory of the happy summer of 1927. To Dear Bill from Christina Ritchie [his landlord] May 26<sup>th</sup> 1928.*





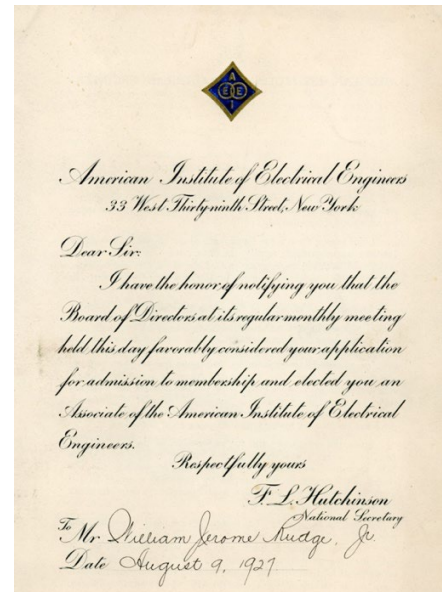
*William Jerome Rudge Jr., presumably in his office ca. 1930*

William Jerome Rudge Jr. began work at the General Electric Company's Distribution Protection Equipment Department while continuing his graduate education at M.I.T. on 26 Dec 1926 [46].

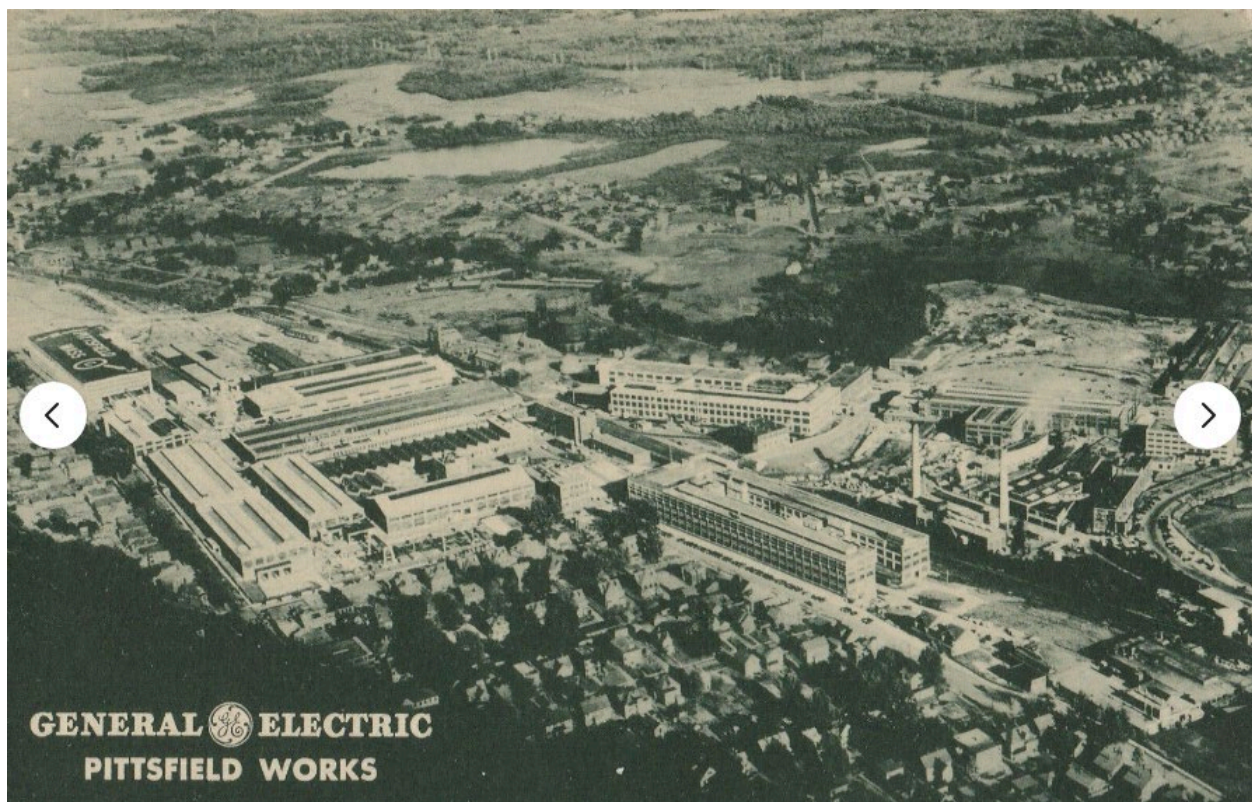


Associate of the American Institute of Electrical Engineers

William Jerome Rudge Jr. was admitted an Associate of the American Institute of Electrical Engineers (AIEE), a prestigious electrical engineering organization on 9 Aug 1927. He presented his first major talk at one of its conferences in 1930. He was actively involved in this organization throughout his career and served as chairman on numerous subcommittees. On 29 Feb 1939 he was transferred to grade of Member; on 22 Mar 1951 he was transferred again to the grade of Fellow. In 1963 he transferred to the grade of Life Fellow [47]. This organization now goes by the name Institute of Electrical and Electronics Engineers (IEEE).



General Electric extended him a more permanent offer of employment on 30 Apr 1928, which included a special pay rate of \$40 per week owing to his more than usual number of years in college [48]. Just a few days later on 7 May 1928 he was assigned to the Lightning Arrester Engineering Section and officially became a resident of Pittsfield, Berkshire Co. MA [43, 49].



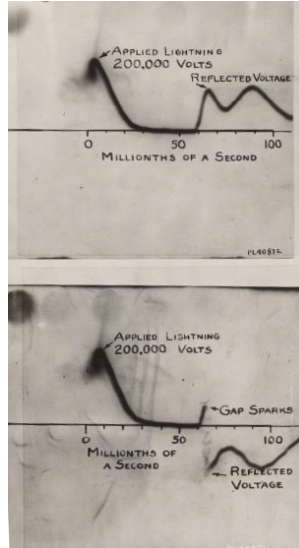
*Undated postcard of General Electric's Pittsfield Works where William Jerome Rudge Jr. worked*

Master of Science in Electrical Engineering Thesis

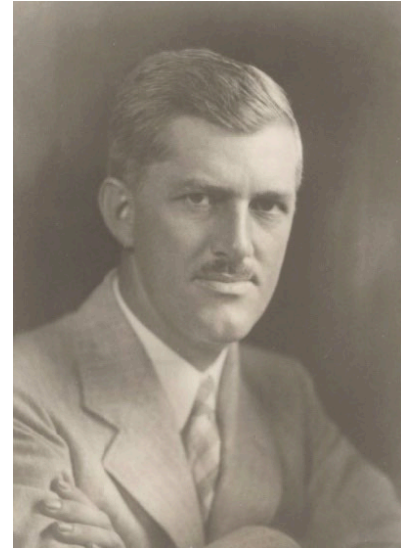
William Jerome Rudge Jr.'s thesis entitled *A Circuit for Automatically Recording Lightning Transients on the Dufour Oscillograph* (May 1928) was written under the direction of Max Knobel, who served as a member of the M.I.T. Department of Physics from 1925-1931. He also specifically acknowledges the assistance of K. B. McEachron and Elmer. J. Wade of the Lightning Arrester Department of the General Electric Company for allowing the work to be done in their department and also their valuable assistance and guidance throughout its development. His technical investigations associated with his thesis project were all conducted within a laboratory setting, distinguishing them from his later field work.



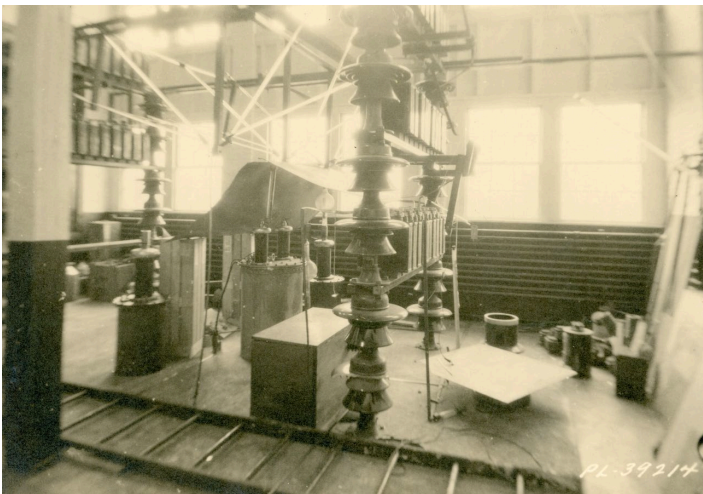
*Dufour Oscillograph*



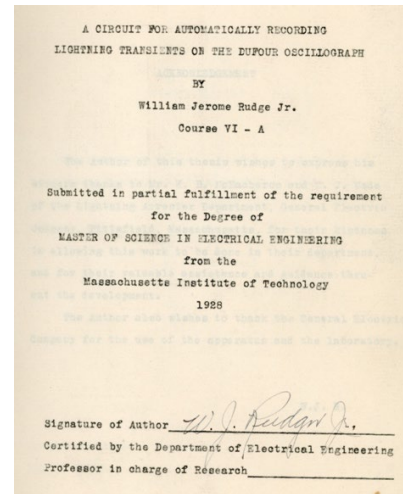
*Results*



*Max Knobel, Physics, MIT*



*500,00 Volt Impulse Generator*



*Title page of William Jerome Rudge Jr.'s M.S. thesis*

William Jerome Rudge Jr. graduated M.I.T. on 5 Jun 1928 with both a Bachelor of Science (B.S.) and an Masters of Science (M.S.) [50]. He submitted an application for his and only patent, which appears to have been directly associated with his thesis work (“Cathode Ray Oscillograph Control”), with E. J. Wade on 26 Jan 1929. It was granted on 3 Dec 1929 [51].



*Early Career at General Electric after Graduate School*

William Jerome Rudge Jr. continued his career at General Electric under the direction of Karl B. McEachron, an electrical engineer who was already becoming well known for his contributions to high-voltage engineering. In the autobiographical account mentioned above, he shares:

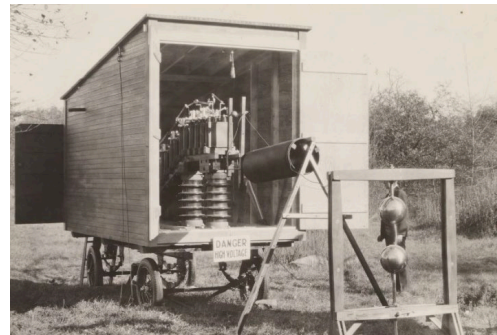
“The first assignment I was given when my association with the Company became permanent was to conduct a field investigation for the purpose of studying the behavior of lightning waves on transmission and distribution systems.” [42]

A North Carolina newspaper account briefly describes his initial field experiments on the effects of artificially produced lightning bolts on transition lines that were undertaken near Pittsfield, ca. 1929.

*“Monroe Boy Makes Bolt of Thunder. Monroe. —William Rudge, Monroe boy, has been assigned by the General Electric company to carry out an experiment looking to protection of wires from lightning. Mr. Rudge is the son of Mr. and Mrs. W. J. Rudge, has been with the General Electric company for a year and has been assigned by his department head, K. B. McEachron, to this exclusive field of electrical experimentation. According to letters received here from Mr. Rudge, he says that his work is nothing less than making a huge bolt of lightning. The purpose is to find out how to protect electrical systems from thunderbolts. The experiments are being carried on in the Berkshire Mountains of Massachusetts. A thunderbolt is made and caused to hit a transmission wire so that the result may be studied. Mr. Rudge says they have a portable apparatus, and from this “a low hum, that rapidly grows louder—a flash of intense blue between two shining brass spheres—a quick sharp report, as though a whip has been popped, and then back from the mountain sides, the rolling echoes bound and rebound, until they slowly die away.” (20 Mar 1929 Cleveland Star [aka Shelby Daily Star] (Shelby, NC) p. 9)*



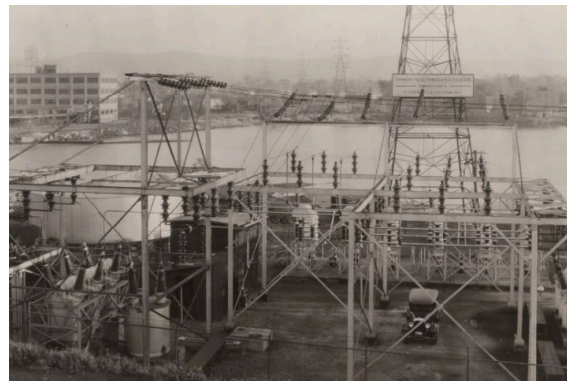
*Karl B. McEachron (1909-1954)c*



*Equipment for cathode-ray oscillographic study of surges on transmission lines from Turners Falls, Mass., to Pittsfield, Mass. Portable impulse generator for applying surge voltage to transmission lines.*



*Equipment for cathode-ray oscillographic study of surges on transmission line from Turner Falls, Mass. Impulse generator applying surges on transmission line at Ferncliff Tower located 5.77 miles from Pittsfield, MA.*



*Equipment for cathode-ray oscillographic study of surges on transmission lines from Turners Falls, Mass., to Pittsfield, Mass. Location of apparatus in Pittsfield Electric Substation.*

## Michigan

McEachron and his team decided to continue their research on lightning and its effects on electrical transmission lines by taking their portable lightning generator to Croton, Newaygo Co. Michigan.

A lengthy newspaper account of their work featuring William Jerome Rudge Jr.'s contributions (below) suggests they did so out of a belief that lightning storms might be more common there, and the presence of high-tension electrical lines associated with the Consumers Power Company.

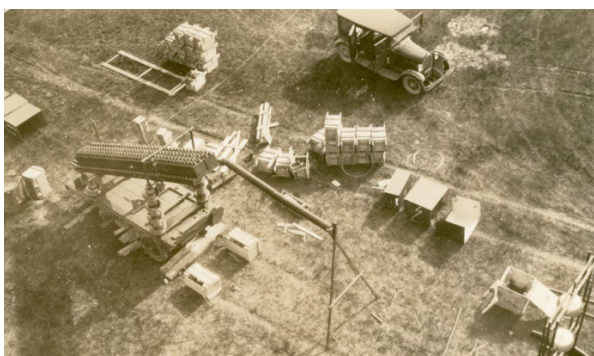
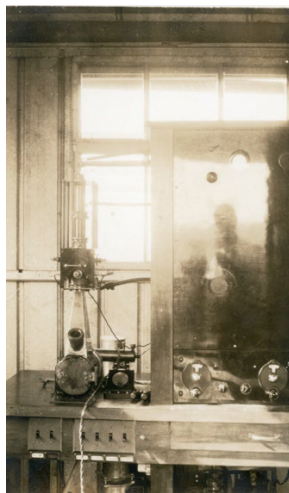
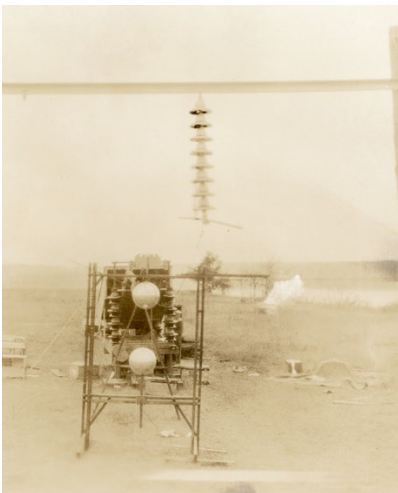
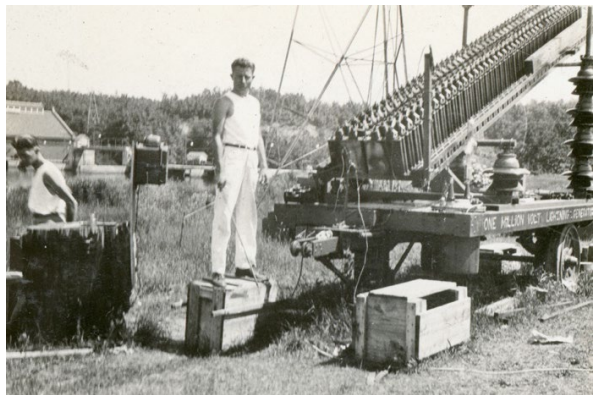


### **Local Boy Dealing in Lightning. William Rudge Jr., Directs Electrical Experiment Near Newaygo, Michigan.**

The local fame which William Rudge, Jr., son of Mr. and Mrs. W. J. Rudge of Monroe, established through his boyhood experiments with electricity and mechanical devices has spread throughout the country in recent months because of a revolutionizing experiment, General Electric Company's lightning arrester, with which he is working near Newaygo, Mich. The large corporation has secured a portable lightning generator, taken it out to Croton, in Western Michigan, there to roam around at the direction of the scientifically gifted Monroe boy, and to strike where the striking will do the most good, that is, where it will give them the inside facts on how to keep the electric lights from going out during these summer thunder storms. Finding that lightning hit too infrequently to furnish much information, the General Electric Company's research department set up the portable lightning generator at Croton in Western Michigan, on the high-tension lines of the Consumers Power Company. There is of course a general supervisor of the research, but William Rudge, his scientific course at Massachusetts Institute of Technology just a year behind, has been virtually in charge of the open-air laboratory since last March. The rolling generator somewhat resembles a hay loading machine. Its power comes mainly from a series of 80 condensers that resembles storage batteries. It can be plugged into an ordinary lamp socket of 110 volt circuit, but carries a portable gasoline engine and generator for dashes into the woods or other remote spots where the engineer needs a little lightning data. It has been used as a toy to split four-foot sticks of hardwood. Mr. K. B. McEachron, the engineer who developed the equipment and who supervises the Monroe boy's experiments, says that there is a rare foundation for immediate and revolutionary improvements in protection against effects of lightning on power lines. Dr. and Mrs. W. C. Houston of Concord surprised their nephew with a visit to his Michigan laboratory two weeks ago, and found Mr. Rudge busily engaged in demonstrating his findings to a group of scientists from the General Electric Company, Westinghouse Electric Company and the Radio Corporation of America, each of the organizations being intensely interested in the outcome of the experiment. It's a long step from the play shop, where tops, miniature electrically driven trains and other machinery were created by boyhood curiosity and natural talent, to a project which rules the age-old menace from a stormy sky, and deals with a man-created lightning, yet William Rudge studies this great problem with the same boyish enthusiasm and determination to find the solution." (The Monroe Journal or Concord Tribune (?) 1929) [52]



*To the extent that my family ever discussed what led my grandfather to Michigan, they always simply described him as being sent to photograph lightning, which was certainly part of what he did.*



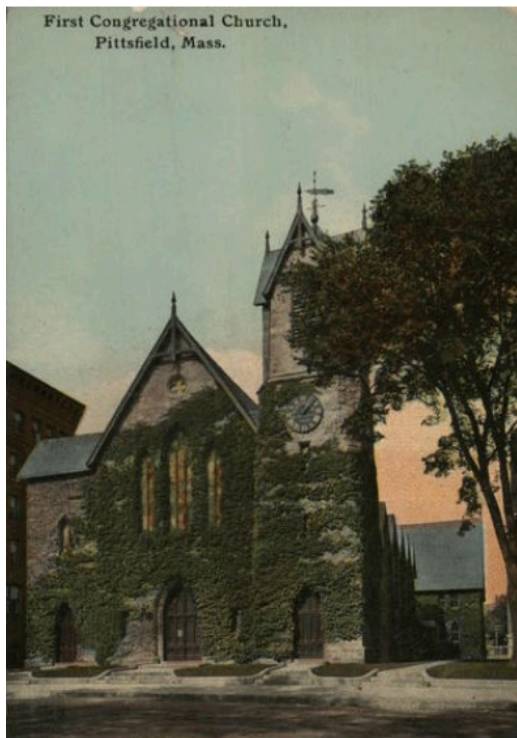
### *Marriage*

William Jerome Rudge Jr.'s research in Michigan was conducted at the General Electric Experimental Station in Croton, Newaygo Co. MI. And it was there in the summer of 1929 that he met his future bride, Lena Anne Wyss, daughter of Alfred Wyss who was superintendent of the Croton Dam. They were engaged on 21 Nov 1929 [53]. Later that year over the Christmas holiday he brought her to his hometown of Monroe, NC and introduced her to his parents, who took an immediately fondness to her [54, 55].

The ceremony took place on 24 Mar 1930 at the parsonage of the First Congregational Church in Pittsfield, Berkshire Co. MA. It was conducted by the Rev. John Gratton. The attendants were Milda Elizabeth Wyss (Lena's sister) and Howard O. Woods. Lena's father, Alfred Wyss, also attended [6, 53, 54]. I've been unable to locate any photos taken at the event. One of the several published newspaper accounts of their marriage identifies the destination of their "wedding trip" as Boston [53]. This being said, I've located multiple photographs in his scrapbook that suggest instead it involved a trip to Washington D.C. and Mount Vernon, VA.



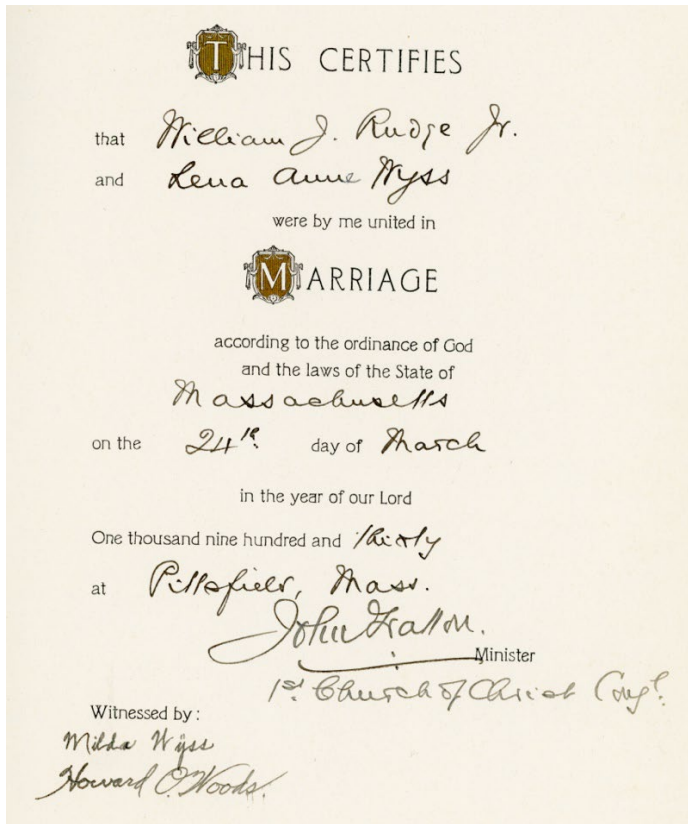
*Frances Winston Kenney, Lena Anne Wyss & William Jerome Rudge Jr. taken Christmas 1929 in Monroe, NC*



*Left: First Congregational Church, Pittsfield, MA; Above top: Washington Monument, Below: Mount Vernon*



*Photo of William Jerome Rudge Jr. in a suit.*

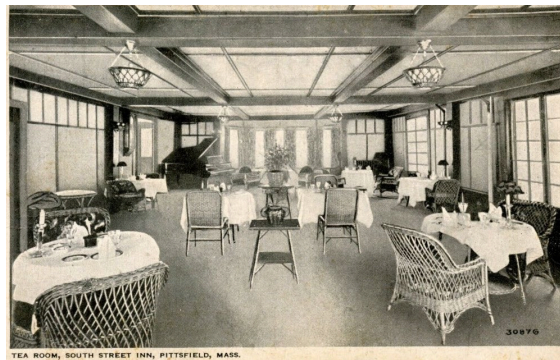


*Certificate of Marriage from the Wedding Service*

William Jerome Rudge Jr. and his wife Anne briefly resided at the South Street Inn in Pittsfield, MA once they returned from their “wedding trip” [6, 55].



*South Street Inn*



*Interior of Tea Room*

Return to Croton

William Jerome Rudge and his wife returned to Croton, Newaygo Co. MI in the summer of 1930 to complete his investigations [53]. Multiple photographs from this time depict the happy couple.



*On back "William and Anne Summer of 1930 Michigan"*

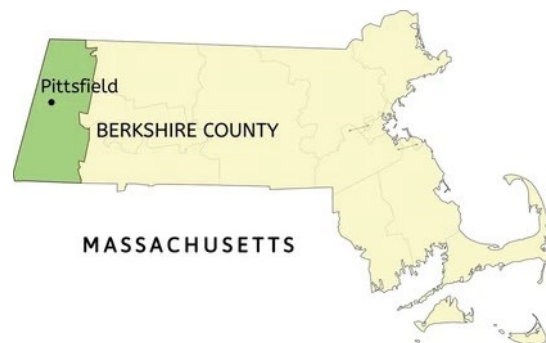
*Return to Pittsfield*

They returned to Pittsfield in October 1930 [56, 57]. A triumphant newspaper article in the Berkshire Evening Eagle entitled “Lightning Missionaries Carry Their Gospel to the Hills of Michigan. Local Pioneers Carry on Unique Experiments that Prove Revealing” included a lengthy discussion of their investigations and a photograph of the team [56].



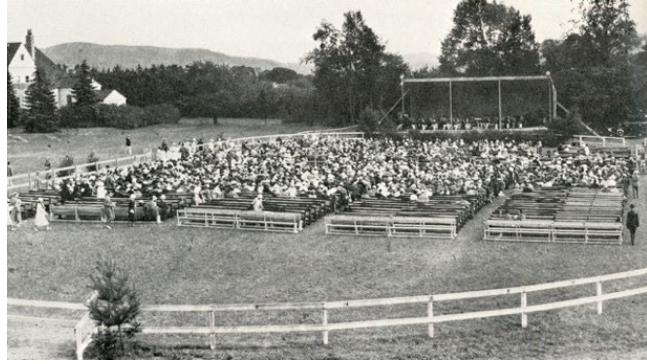
*A Brief History of Berkshire County from 1930-1945*

Berkshire reeled with the rest of the nation under the blows of the Great Depression (1929-1939). At the Pittsfield GE, where 8,500 worked in 1929, there were only 2,200 at the bottom of the slump. One can only imagine how grateful William Jerome Rudge Jr. must have been to have a steady job at G.E. at this time. Relief rolls skyrocketed; business was so bad that a Pittsfield merchant grumbled “Even the people who don’t pay aren’t buying.” Eight Civilian Conservation Corps camps and hundreds of WPA projects were set up to



ease the misery of the jobless. Yet, Berkshire actually began to prosper. Once wealthy New Yorkers and Bostonians accustomed to summering at fashionable European centers settled for more modest vacations nearer home—which for many meant Berkshire. The tourist trade bucked the general downward trend of business, climbing steadily through the '30s.

Over a span of about 20 years, centering in the 1930s, Berkshire's reputation as an enclave of culture was born. The new culture was much broader, both in variety and scope, and involved large numbers of people as spectators if not participants.



*Symphonic music on a large scale was launched in Berkshire in 1934 at the Hanna farm, Interlaken. Three programs were put on by 65 New York Philharmonic players under Henry Hadley. Attendance topped 5,000, which encouraged the sponsors to form the Berkshire Symphonic Festival that fall.*

Prominent among these developments was the origin of the Berkshire Symphonic Festival, born in 1934, which grew into the nation's best known summer musical mecca, Tanglewood. The Tanglewood music festival subsequently moved under a tent, then built the Shed for its 1938 season.

Berkshire county felt the impact of World War II in multiple ways, beyond the drain of young men drafted into service. There were scrap-metal drives, military-truck convoys miles long frequently roared over the highways, housewives came out of the kitchen and into plants such as Sprague in North Adams and the GE in Pittsfield. Berkshire staged practice blackouts, and civilian spotters were posted in improvised towers to look for "enemy" aircraft. Shortages of everyday products developed. People lined up to buy scarce cigarettes, and women stormed department store counters whenever a few nylons went on sale. There was a hoarding of sugar and coffee, and brisk traffic in food and gasoline stamps.

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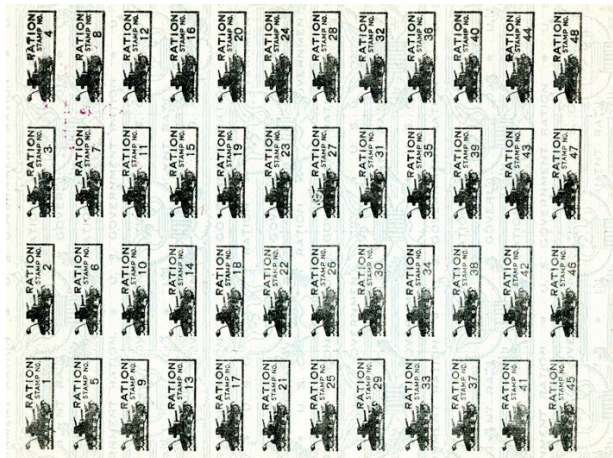
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## Pittsfield

Pittsfield's ability to respond to the many challenges associated with the Great Depression was intimately linked to the success of General Electric its largest employer. In 1891 William Stanley Jr. relocated his Electric Manufacturing Company from Great Barrington to Pittsfield, where it produced the first electric transformer. Stanley's enterprise was the forerunner of the internationally known corporate giant, General Electric (GE). Largely thanks to the success of GE, Pittsfield's population in 1930 had grown to more than 50,000. The city continued to grow over the next three decades. At its peak in the 1960s, the Pittsfield GE plant had a workforce of over 13,000. The decline and relocation of General Electric's transformer and aerospace divisions over the second half of the twentieth century has had a pronounced and adverse effect on the region's economy.



## Residence in Pittsfield

From the end of 1930 until 1933, William Jerome Rudge Jr. and his wife Anne nee Wyss Rudge lived on 104 Elizabeth St. [57, 59]. In 1934 the family moved to 21 Revilla Terrace, where they rented a house with 4 rooms and a detached garage through 1945 [60, 61].



*21 Revilla Terrace, Pittsfield MA*



*William Jerome Rudge Jr. and his son, William Jerome Rudge III*



*Anne nee Wyss Rudge, husband William Jerome Rudge Jr. and son William Jerome Rudge III*

Christmas Cards

In the early 1930s William Jerome Rudge Jr. and his wife began a tradition of sending out ever and ever more ornate Christmas photographs. One of these earned him a photography award [62]. Those that have survived are for the most part undated, but I suspect the ones depicted below were created while they lived at Revilla Terrace.



*A 1931 Christmas card (outside and inside) sharing news of the birth of their son, William Jerome Rudge III*



*Undated photos sent out at Christmastime*



*Front*



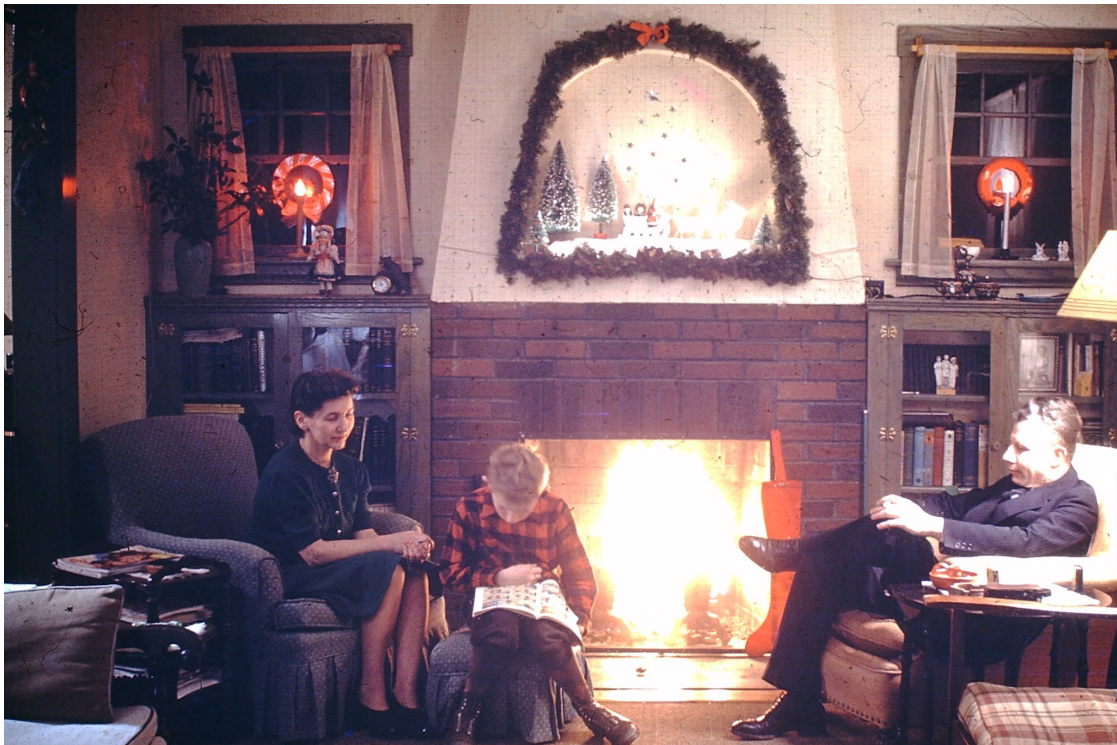
The latch hangs free, the door swings wide,  
To all our friends at Christmas Tide,  
Fire on the hearth, good will and cheer,  
To greet our friends through all the year.

*Inside*

*The latch hangs free, the door swings wide,  
To all our friends at Christmas Tide,  
Fire on the hearth, good will and cheer,  
To greet our friends throughout the year*



*Photo sent out in December 1943*

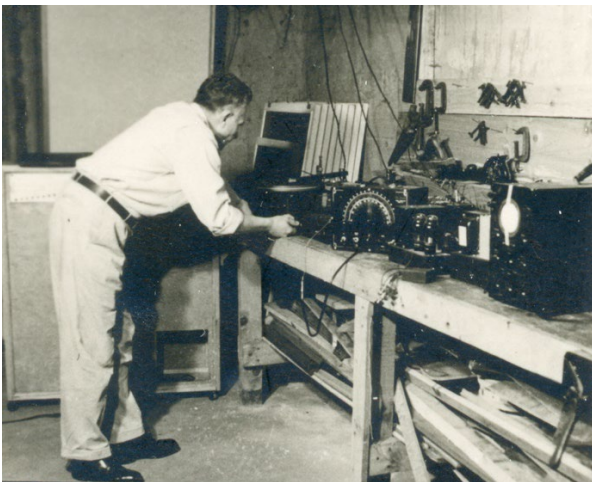


*Anne nee Wyss Rudge, her son William Jerome Rudge III and her husband William Jerome Rudge Jr.*

These two photos of William Jerome Rudge Jr. and his son William Jerome Rudge III (judging from his son's apparent age) were taken ca. 1940 while the family was still living on Revilla Terrace in Pittsfield.



William Jerome Rudge Jr., was among his other attributes a skilled electrician and handyman. Below are two photos of him at work. On the left is a photo of him working on what appears to be stereophonic equipment (taken from a composite photo Christmas card). On the right is his prized lathe, which according to his son's 1991 Christmas newsletter was ultimately donated to Berkshire Community College.



### *Professional Career (1930-1945)*

William Jerome Rudge Jr.'s autobiographical remarks (mentioned above) continue:

“After three years of research work in this area [studying the behavior of lightning waves on transmission and distribution systems], I was transferred to a product design group and in later years have become Manager of Product Engineering for this group.” [42]

In Dec 1930, William Jerome Rudge Jr. was transferred to the Lightning Arrester Proposition Section where he worked as an application engineer [63]. He was later reassigned and placed in charge of the Lightning Arrester Design Section sometime in Jul 1940 [64]. A resume he later wrote in 1951 provides insight into what his job entailed from 1930-1945:

From 11-3-30 to July 1940: Proposition Section of same Division. In this capacity I prepared propositions, collecting or working out the engineering data, costs, shipment and passing the complete proposition to the Commercial Section. During this period I took part in many investigations, all of which were aimed at improving lightning protection of electrical apparatus. I handled complaints, which often involved visits to various utility plants which had suffered lightning damage or had experienced difficulties with the equipment manufactured by the Lightning Arrester Div. It was necessary for us to determine the cause of the trouble and make recommendations for its correction. Since there is a very close tie between complaints and new developments, using the experience gained from settling complaints as basis for suggesting improvements to be made in new designs. In cooperation with other engineers I made a study of behavior of lightning surges in rotating a-c machines and cable systems and worked out methods for providing protection against lightning damage. I also aided in the development of protector tubes by making a correlation of the various electrical and mechanical data so that a designer could select the proper proportions of material to meet required electrical ratings.

From July 1940 to 9-1-45: Placed in charge of Design in the Lightning Arrester Engineering Section. In this capacity I continued to handle complaints, but in addition began to plan the work for the members of the Section. To do this required coordinating the efforts of the Design Section with the other Design Sections of the Company. In this position I was required to prepare reports for the Management covering progress of the work in the Section. I was made a member of the Product Committee, which deals with the Division's general business and products, and also a member of the Product Sub-committee which follows the details of the design, manufacture and application of products produced by the Division. I was Secretary of the Product Sub-committee from 1943 to December 1947 and Chairman from December 1947 to July 1950. I was also Secretary of the main Product Committee from 1943 to July 1950 and Chairman of the main Product Committee from July 1950 to date.

His job at this time involved a fair amount of travel to regional and national AIEE conferences where he and his colleagues regularly gave presentations. Of particular note is that some of the write-ups from these events refer to them as “transformer specialists” and “salesmen,” which underscores his move from basic research to the product design part of the business [65]. William Jerome Rudge Jr. wrote numerous technical papers throughout his career [66]. He was also awarded a prestigious one year M.I.T. Business Fellowship (one of only six to receive among M.I.T.'s alumni) on 25 May 1934 [67].

American Institute of Electrical Engineers

**WINTER CONVENTION**

January 23-27, 1933

HEADQUARTERS—Engineering Societies Building, 33 West 39th St., New York, N. Y.

**Announcement**

THIS YEAR'S WINTER CONVENTION, which will be held with headquarters in the Engineering Societies Building, New York, January 23-27, will have all the splendid features of past winter convention programs. Fourteen technical sessions, a smoker, medal presentation, lecture, dinner-dance, and a variety of inspection trips assure a busy and profitable week with ample opportunity for enjoyment.

**The Edison Medal** awarded to Harold Cleveland "for his contributions to the art of telephone engineering and the development of electrical communication" will be presented to him in the Engineering Auditorium on the evening of Wednesday, January 25, at 8:15 o'clock.

**The Smoker** will be held in the Engineering Societies Building on Tuesday evening, January 24. Schwaltz will serve a buffet-dinner at 6:00 p.m. and later a variety of entertainments will be offered in the auditorium. Tickets \$2.75 per person.

**The Dinner-Dance**, which always affords much pleasure to those in attendance, will be held this year in the Ballroom of the Hotel Roosevelt at 7:30 o'clock on the evening of Thursday, January 26. Reservations may be made in advance for tables seating eight or ten people. Tickets \$5.00 per person.

**For the Ladies** in attendance, in addition to some of the features already mentioned, a luncheon and bridge has been arranged at Engineering Women's Club on Tuesday, January 24, by the ladies' committee, Mrs. E. B. Meyer, chairman. During the convention information will be available at the ladies' headquarters as to theaters, shopping districts, etc.

**The Board of Directors** will meet at Institute headquarters, Room 1001, Wednesday, January 25, 2:00 p.m.

**Reduced Railroad Rates** of half fare on the return trip over the same route will be available to members and guests, provided 100 certificates are validated at the registration desk. Present the enclosed slip to your local ticket agent. Consult him regarding the territory and dates applicable, and obtain your certificate authorized by the railroad passenger associations.

**Register in Advance** by filling in and mailing the enclosed **ADVANCE REGISTRATION CARD**. Your badge will be ready on arrival and you will avoid congestion at the registration desk.

H. H. HENLINE,  
National Secretary

### The Problem [68]

As mentioned above, William Jerome Rudge Jr. took out a loan from his uncle, Dr. William Cyrus Houston to cover the cost of his graduate school education at M.I.T. during the years 1925-1928. In the thirteen years that followed over the course of the Great Depression he continued to send regular payments against the debt, apparently was unaware of how much interest was being charged. In the absence of regular statements on the growing balance he appears to have lost track of just how much he still owed.

Things came to a head in early January 1939 when Uncle Dr. learned he had a serious medical issue, one that led him to believe he didn't have much longer to live. He had his own outstanding debts to deal with, and in the course of trying to set his financial affairs in place, he sent out word to all of the people who owed him money that they would need to repay their debts. William Jerome Rudge Jr. received this request just prior to a planned visit to see his father, who was dealing with his own health crisis. William John Rudge had been diagnosed with a serious heart condition and the family had urged his son to make one last visit to Monroe before his father died. William Jerome Rudge Jr. apparently sent a letter to his parents informing them of his problem with Uncle Doctor, and one can only imagine how difficult it was for his mother to deal with both situations at once. She made a point of not sharing her son's letter with his father, and in a lengthy reply to him reveals she burned it for fear her husband would learn about the feud. Throughout the letter Jo Rudge



*Dr. William Cyrus Houston (1867-1965) and his wife, Nina Person nee Adams Houston (1873-1966)*

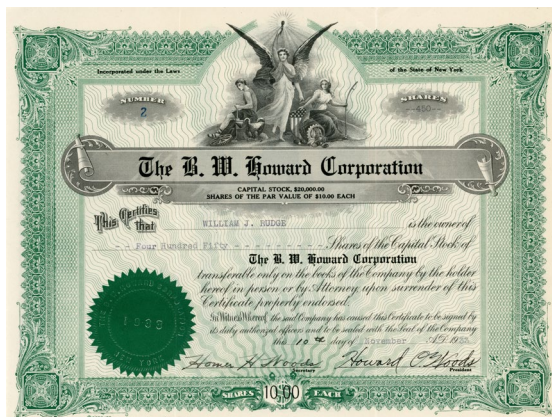


*William John Rudge (1876-1940) and his wife Ethel Josephine nee Adams Rudge (1876-1963)*

expresses concern and love for her son, but also sympathy for Uncle Doctor's position. She draws attention to multiple instances in which Uncle Doctor helped members of the family over the years. Among her examples is how he helped manage the financial problems that ultimately led to the sale of both her husband's business and the house. She draws attention to the fact that the loan did not involve compound interest (an accusation her son apparently made) and disputes Uncle Doctor was trying to take financial advantage of the situation [69].

The precise details of the loan and what happened are set out in a detailed 5 page, single spaced letter William Jerome Rudge Jr. sent to his uncle nearly a year later on 21 Mar 1941 [70]. The total amount of the loan was \$3,182.44 (including an insurance premium of \$239.44), spread out in twelve payments of \$133- \$400 from 11 Sep 1925 through 13 Aug 1928. Uncle Doctor apparently offered it with the expressed stipulation that his nephew give up smoking.

The total amount William Jerome Rudge Jr. ultimately repaid with interest came to \$5,366. The letter criticizes his uncle for being remiss in providing annual statements of his account, despite the fact they were requested. Only one such statement had ever been sent and it was dated 1 Feb 1939. It calculates the balance still due, noting he will not count canceled checks against it. It draws attention to the financial hardships everyone faced during the depression, which dramatically affected his ability to repay the loan [71]. He responds to perceived



*Stock Certificate found among William Jerome Rudge Jr.'s papers [72]*

criticisms of his choice to invest \$500 in the Wm. Houston Co. (rather than repay the loan), which he points out was not done at a loss. He draws attention to how, as someone just out of college, he was relatively naïve about the agreement he was signing, and further that he did not regard it as a strict business proposition—indeed at the time his Aunt Nina had led him to believe no interest would be charged, or at the very least adjusted in light of the economic downturn. The rate of interest charged was 6% (a rate William Jerome Rudge Jr. in retrospect regarded as exorbitant compared to M.I.T.'s educational loan rate of 2%). The letter was accompanied by a check for the full remaining amount (with the generous assistance of his father-in-law Alfred Wyss) and a request for a receipt “Paid in Full” and also the two insurance policies held as security [73]. He apparently sent a brief message to his mother informing her that the debt had been resolved and in a reply she encouraged him not to dwell on it further [74].

His aunt, Nina Person nee Adams Houston, sent a detailed response to each of the points he made on 25 Mar 1941. She begins the letter by stressing the financial hardships she and her husband faced when they were first married and the frugal economy by which they lived. She denies what she refers to as the “mistaken idea” that they were rich. To the extent that they have accumulated some savings, it has been done with the idea of supporting themselves in their old age and avoiding becoming dependent on family members. She points out that in her part of the country it is considered a kindness not to “push” people who are indebted. She reminded him of how Uncle Doctor had supported his education in college, both in the form of a financial gift of \$250 and use of his car, and also the generous way he helped other relatives, including both his father and grandmother Fannie nee Person Adams. The letter provides no sympathy for someone being naïve at the age of 23 about financial affairs, and further insists 6% interest has been the legal rate in N.C. for many years. Nina denied she ever suggested no interest would be charged, and pointed out she recalled two conversations she had with him during the past ten years in which he confirmed he would pay interest and indeed had estimated a larger sum than he actually owed [75].

William apparently did get a receipt for the loan shortly after he sent a check for the balance, but it took until the end of the following August before he was finally able to get Dr. Houston to provide a notarized release of the two insurance policies [73]. Both William Jerome Rudge Jr. and his aunt Nina's letters summarized above ended on a common thread, namely they wanted to put the upset behind them and reestablish the warm and trusting relationship they had previously, it's unclear to me that they were ultimately able to achieve this.

## Manhattan Project

I'll never forget the first time I learned about my grandfather's alleged involvement in the "Manhattan Project," a highly classified, American led effort to develop the first functional atomic weapon during World War II in the years 1943-1945.



I was attending a family reunion of descendants of Henry Bethune Adams (1849-1915) organized by William "Billy" David Snyder held at the end of April 1985. My first cousin once removed Stephen Rudge Kenney (left) was in a conversation with my father William Jerome Rudge III (right) and casually mentioned he had heard that my grandfather was involved in the Manhattan Project. My father confirmed this was the case, but was unable to provide any details or insight into what William Jerome Rudge Jr.'s role if any might have been. Over the course of the next twenty years I attempted to track down the details of my grandfather's involvement, mostly via correspondence with his former colleagues.



On the surface it was a plausible claim. Newspaper accounts written in the years following the war drew attention to the role practically every major apparatus plant had played in the war effort, and the specific role the Pittsfield General Electric plant had played in the development of the first atomic bomb. Most who worked on it did so with knowing it at the time. [76].

One possibility I dismissed almost immediately was that he was part of elite team of physicists assembled to figure out the logistics of transforming a theoretical possibility into a functioning bomb that could be used in the war effort. My grandfather was not a theoretical physicist and I have no record of any correspondence with anyone associated with that group or on this topic.

A second possibility I considered is that one or more of the technical papers my grandfather had written had somehow figured into this work. My grandfather wrote a number of technical papers associated with protecting high voltage electrical lines, transformers and capacitors from lightning. There are ways, such as Google Scholar, to track publicly available scholarly papers that cite my grandfather's writings, but to my knowledge there is no similar database that would track technical papers consulted for such a top secret military project.



*Alpha Racetrack of Y-12 Electromagnetic Plant where uranium isotopes were separated to enrich uranium used for the bomb*

A third possibility is that William Jerome Rudge Jr. was one of literally thousands of engineers and others who were commissioned during the war to assist in the construction and maintenance of equipment necessary for the creation of the bomb, many of whom were unaware at the time of precisely what they were working on. Julius Hagenguth, an international authority on lightning and high voltage phenomena, was a friend and colleague of my grandfather. Hagenguth is specifically credited in his obituary as heading a team associated with the Manhattan project that worked at Oak Ridge, TN.



“Julius Hagenguth Dies; Authority on High Voltage...He [Hagenguth] led a team of engineers who solved voltage problems in the electromagnetic equipment used in uranium separation at the Oak Ridge atomic facility” (14 Feb 1969 The Berkshire Eagle (Pittsfield, MA) p. 15).

After reading this, it seemed obvious to me that my grandfather was probably a member of that team. This being said, there are two problems with this interpretation. First, Hagenguth’s widow in a letter to me was unable to confirm it [77]. Second, I have been unable to find any evidence of my grandfather traveling to Oak Ridge, TN during this time period, e.g. his pocket diaries include no record of any such travel.

In response to one of my letters directed to J. Bradley Cooper, a retired GE employee who had a keen interest in history. Cooper drew my attention to the fact that Hagenguth was suspected of being a Nazi sympathizer (to the point of having some of his associates circulate a petition demanding the company fire him) and as such it would have been difficult if not impossible for him to have obtained the necessary security clearance. This being said, Cooper noted further that so long as his (and my grandfather’s) work was confined to the maintenance of equipment and the solving of technical problems, it would not have required any special clearance [78]. So it is possible that William Jerome Rudge Jr.’s expertise was utilized in this more limited sense.



Samuel Sass, another former G.E. employee, contacted two of my grandfather’s former colleagues who were still alive, G. Frank Lincks and Eugene Saksaug, and neither was aware of a connection between William Jerome Rudge Jr. and the Manhattan Project [79].



Harry Mason, another former GE employee who worked in GE’s Power Transformer Engineering Section points out that the task of creating high voltage rectifiers needed to isolate uranium isotopes for use in the project was undoubtedly something that General Electric did under Horace Hubbard, and not Hagenguth’s leadership. Mason was a member of that team and could definitely confirm that William Jerome Rudge Jr. was not a part of it. He pointed out further that my grandfather’s expertise might have been drawn upon when it came to the timing mechanism [80].

Among my grandfather’s papers I was able to find a personnel security questionnaire he filled out in 1963 for the Department of Defense. He mentions he has previously been given security clearance only twice, both times in the spring of 1950 for work associated with the Navy [81]. Perhaps his most definitive personal statement about what he did during World War II comes from a four page write up for promotion he wrote in the summer of 1950, well after it became public knowledge that the Pittsfield Works plant was involved in the creation of the atomic bomb [82]. On page 2 he writes:

**At the start of the war I was directly responsible for the development of a line of radio noise filters for aircraft and other military uses. This work carried on in close cooperation with the Air Force, Wright Field Laboratory and the General Electric Company's General Engineering Laboratory, and various aircraft manufacturers.**

It’s possible with the release of classified information, e.g. lists of employees at the Oak Ridge plant, a new lead will arise. But I think it’s safe to conclude William Jerome Rudge Jr. had at most an indirect role in the Manhattan Project.

### *A Brief History of Berkshire County from 1945-1975*

The end of World War II marked a period of transition for Berkshire County. Like the rest of the nation, the county experienced post-war economic growth, driven by a surge in manufacturing and infrastructure development. Industries such as textiles, paper, and electronics flourished, all of which contributed to Berkshire County's economic prosperity.



One significant development during this period was the expansion of General Electric (GE) in Pittsfield. GE's presence in Berkshire County dated back to the late 19th century, but it expanded significantly during the post-war period. The company's manufacturing facilities played a crucial role in the county's economy, providing employment opportunities and shaping the local landscape. However, the post-war period also brought challenges, particularly in the agricultural sector, where mechanization and urbanization led to declines in agricultural output and rural population.

The 1960s marked a period of profound social change and cultural evolution in Berkshire County, mirroring broader trends across the United States. The civil rights movement, the women's movement, and the counterculture movement all had an impact on the county, shaping its social fabric and cultural identity. The Civil Rights Act of 1964 outlawed discrimination based on race, color, religion, sex, or national origin.



*The counterculture or hippie movement*

The establishment of organizations like the Berkshire Women's Political Caucus and the Berkshire Women's Action Group provided a platform for women to address issues such as gender discrimination, reproductive rights, and equal pay. Meanwhile, the counterculture movement, with its emphasis on individual freedom, experimentation, and social change, found expression in Berkshire County. The region became a haven for artists, musicians, and writers seeking refuge from urban life. The establishment of cultural institutions like Tanglewood, the summer home of the Boston Symphony Orchestra, further cemented Berkshire County's reputation as a cultural hub.

The latter half of the 1960s and the early 1970s brought economic challenges to Berkshire County, as the decline of traditional industries and changing consumer preferences reshaped the local economy. Industries like textiles and paper, which had been the backbone of Berkshire County's economy, faced competition from overseas manufacturers and struggled to adapt to changing market conditions. The closure of GE's manufacturing facilities in Pittsfield in the 1980s dealt a significant blow to Berkshire County's economy, leading to job losses and economic hardship for many residents. The decline of manufacturing prompted local leaders to seek diversification and innovation to revitalize the economy. One response to these economic challenges was the emergence of tourism as a key industry in Berkshire County. The region's natural beauty, cultural attractions, and recreational opportunities attracted visitors from across the country, providing a much-needed boost to the local economy. The establishment of cultural festivals, art galleries, and outdoor recreational facilities further enhanced Berkshire County's appeal as a tourist destination.

Amidst the rapid development and cultural shifts, Berkshire County also grappled with environmental conservation and preservation efforts. The town's natural beauty and pristine landscapes were increasingly threatened by urban sprawl and industrialization, prompting concerns among residents about the need to protect the environment.

Residence in Lenox

On 26 Jul 1945 William Jerome Rudge Jr. and his wife purchased a house on Beecher Lane., Schermerhorn Park in Lenox, Berkshire Co. MA, a suburb of Pittsfield, Berkshire Co. MA where he and his family resided for the rest of his life [83, 84]. The house was originally built in 1942 and had a detached one car garage [85].



*Inscription on back: "What you see coming up from the road toward the front"*



*Inscription on back: "What you see as you get close to the House from front side. Note the window boxes"*



*Inscription on back: "Across the flower bed from upper front side of lot"*



*Inscription on back: "Rear of house. Note pebble terrace."*



*Inscription on back: "Rear of house further back. Hatch way goes to cellar"*



Extensive renovations completed by the end of 1956 (see card below) included creation of a kitchen and bathroom in a new section connecting the house with a larger two car garage [85].



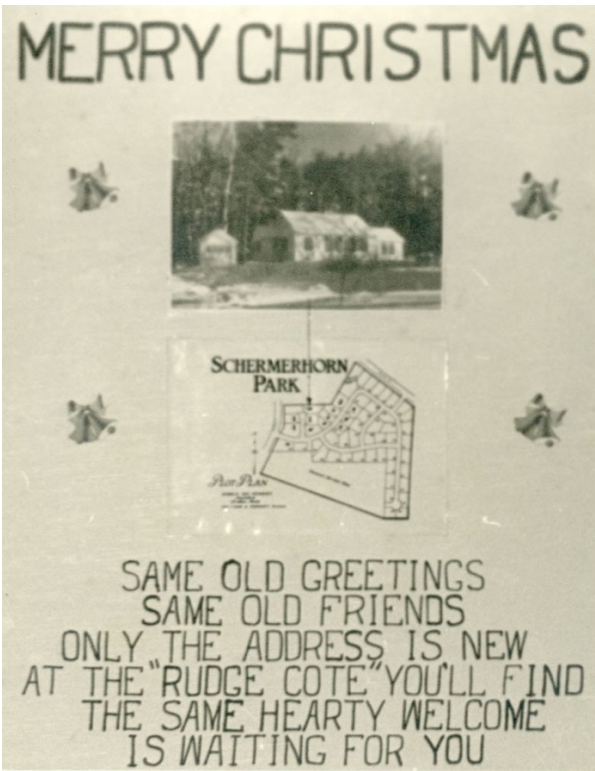
*Photograph of "The House" where William Jerome Rudge Jr.'s family lived in Lenox (developed Nov 1957)*



*Blueprint of plan for house extension*

Christmas Cards

They continued their tradition of sending Christmas cards, and the photos they used regularly featured the outside of the House.



*The above photo on the left bears the inscription "Christmas 1946 Rudge Cote"; Right: inset of same*



**GREETINGS**  
*from Our House  
 to Your House*



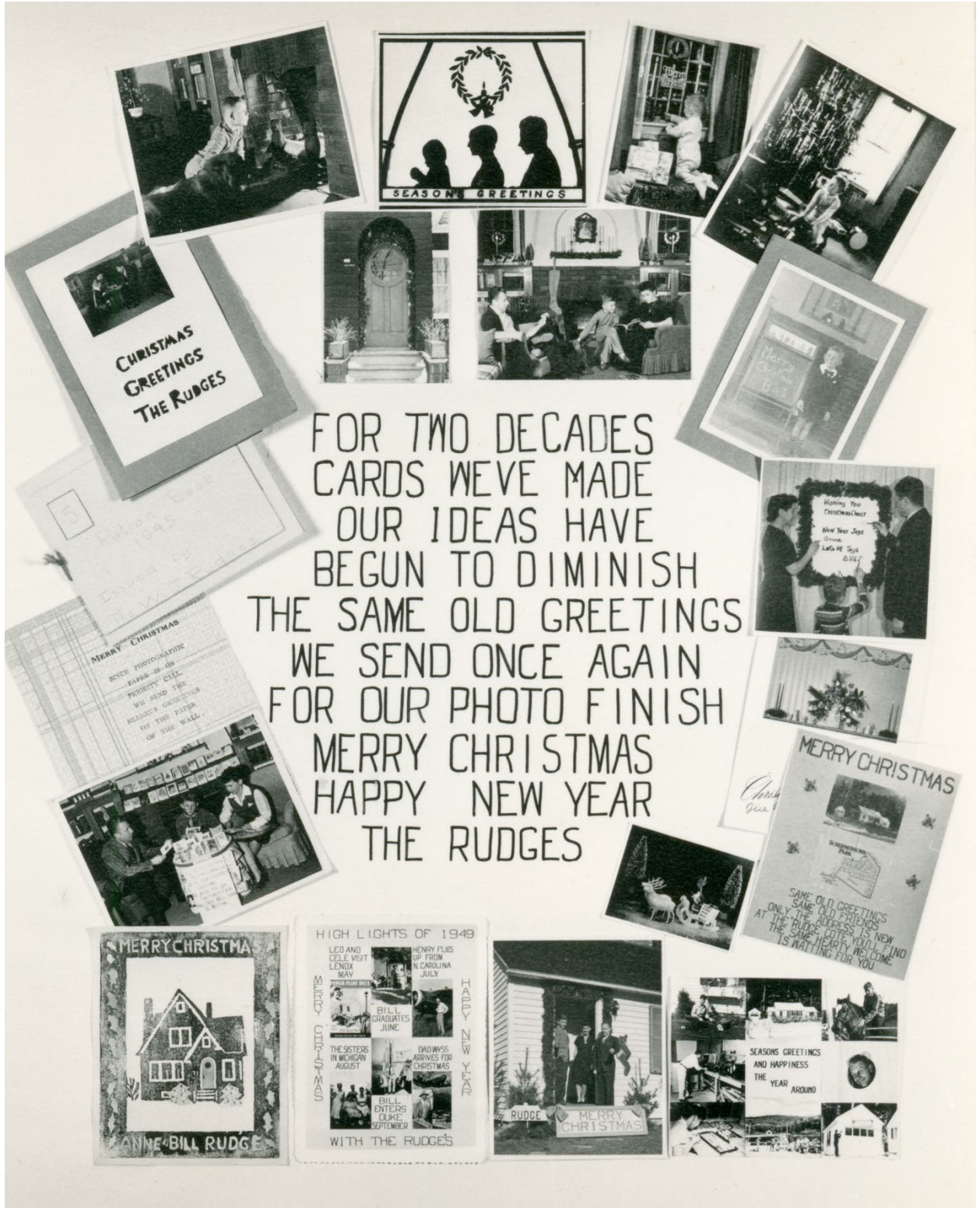
**The Ridges**

Two reprinted below feature multiple photographs and previous cards.



**SEASONS GREETINGS  
 AND HAPPINESS  
 THE YEAR AROUND**





CHRISTMAS GREETINGS THE RUDGES

SEASONS GREETINGS

MERRY CHRISTMAS  
 SINCE PHOTOGRAPHIC PAPER IS SO PRECIOUS WE SEND THE MESSAGE ON THE WALL OF THE WALL.

MERRY CHRISTMAS

MERRY CHRISTMAS  
 ANNE-BILL RUDGE

FOR TWO DECADES  
 CARDS WE'VE MADE  
 OUR IDEAS HAVE  
 BEGUN TO DIMINISH  
 THE SAME OLD GREETINGS  
 WE SEND ONCE AGAIN  
 FOR OUR PHOTO FINISH  
 MERRY CHRISTMAS  
 HAPPY NEW YEAR  
 THE RUDGES

HIGH LIGHTS OF 1949  
 LEO AND GLENN VISIT LENOX MAY  
 HENRY FLIES UP FROM N. CAROLINA JULY  
 BILL GRADUATES JUNE  
 THE SISTERS IN MICHIGAN AUGUST  
 BILL ENTERS DUKE SEPTEMBER  
 DORIS ARRIVES FOR CHRISTMAS  
 WITH THE RUDGES

MERRY CHRISTMAS  
 SAME OLD GREETINGS  
 SAME OLD FRIENDS  
 ONLY THE ADDRESS IS NEW  
 AT THE RUDGE COVE YOU'LL FIND  
 THE SAME HEARTY WELCOME  
 IS WAITING FOR YOU

SEASONS GREETINGS AND HAPPINESS THE YEAR AROUND

### *Civic Life*

Shortly after the move to Lenox, William Jerome Rudge Jr. became an active member of the Lenox community.

### Kiwanis

He is identified as part of a committee responsible for arrangements for a charter presentation of the local Kiwanis Club on 26 May 1946 [86]. He became a member on 30 Jul 1951, and on 31 Oct 1951 was named to its board of directors and served in that capacity during years 1952, 1954 and 1957 [87]. Over the years he chaired the Attendance and Membership committee and served on several other committees [88]. He was also active in the planning of a regular event in town called “Old Fashioned Days” sponsored by the Kiwanis [89]

*“WHY KIWANIS SPONSORS OLD-FASHIONED DAYS. The Lenox Kiwanis Club consists of 53 residents of Lenox who meet every Monday night and discuss ways to improve Lenox. As it is quite difficult to improve Lenox very much, it has proved necessary to find speakers who at least improve the minds of the members of Kiwanis. The speakers have ranged in subject from dancing to the artificial insemination of cattle, and have included magicians, weathermen, politicians, soldiers, lawyers, priests, rabbis, and a great many just plain citizens who have something to say. The annual Fete day is the idea of the ex-lion and rodeo performer, George Bisacca, who operates his own brand of three ring circus for five months a year at Eastover, but really lets himself go every fall when the whole town runs out for two days forgetting dignity and proving that Lenox is still a pretty colorful place. The purpose of the holiday is two-fold. First to have fun. Spectators are urged to become more than spectators. Second to raise money. As the price of everything indicates, the object is strictly secondary. Every community has a lot of problems, outside the scope of the selectmen, not the business of any individual, but the business of the whole community. The proceeds from this event are used to meet these problems. They are such things as putting up the Christmas tree every year, help at maintaining the public beach, class day prizes at the high school, sending some kids to camp, contributing to Red Cross, Community Chest, March of Dimes, and the various health drives. Last year all the proceeds of Old Fashioned Day went to the Community Center; this year they will be divided among the different Lenox organizations and used for other community projects. This festival is not just a Kiwanis affair. The whole town cooperates to make it a success, and the whole town benefits from it.” (Quote and photo to left below from Souvenir program from Lenox Old Fashioned Days 1952 p. 3.)*



*Left to right: Lena Anne nee Wyss Rudge, her husband William Jerome Rudge Jr. & “Marion”*



*The photo on the left was adopted for use on the cover of the Old Fashioned Days Program for 1954!*





**QUAINT FOURSOME**  
The Grand Ball was a lavish and colorful spectacle. In this group of Lenox ball-goers, left to right, are: Mr. and Mrs. Bryce Wyman and Mr. and Mrs. William J. Rudge.

14 Oct 1956 *The Springfield Sunday Republican* (Springfield, MA) p. 80



*Left: Hat box and top hat once worn by William Jerome Rudge Jr.*

### Music Room, Lenox Library

In 1947 William Jerome Rudge Jr. assisted on behalf of General Electric in the creation of a record player for the Lenox Library's Music Department and together with T. H. Hall took on responsibility for its ongoing maintenance [90]. The equipment was installed the next year:

*"New Music Room Established By Lenox Library Association. \$3000 Custom-Built Record Player Placed in Goodman Room—Boston Symphony Donates 20 Albums of Recordings... The library's music committee explained today that this was a community project intended to provide classical and semi-classical music for all residents of the town on a year-round basis... The machine was designed and constructed by Clinton O. Jones and GE engineers William Rudge, T. H. Hall and F. H. Judkins. It is designed in three units, the turntable, sound reproducing mechanism, and loudspeaker, and is constructed so that the loudspeaker can be used anywhere in the library or in Sedgewick Hall for concerts... The new community music project was brought about through the work of the library's music committee which is composed of... William Rudge" (30 Mar 1948 The Berkshire Eagle (Pittsfield, MA) p. 4)*

He became a regular member of the Lenox Library Music Committee. In 1951, they replaced the record player with a three speed turntable [91]. They installed an FM radio tuner in 1957 and stereophonic high fidelity equipment including a new turntable in 1959 [92].



*Lenox Library, Lenox, Berkshire Co. MA*



*Interior Lenox Library*

### Other Community Activities

On 8 Mar 1948 a newspaper article identifies him as a solicitor involved in the raising of funds to send a local basketball team to the Olympic Game being held at Madison Square Garden [93]. Later in the year he and his wife served as chaperones at the school's Junior Prom [94]. In Mar 1959 he gave a talk on stereophonic sound and high fidelity at an explorer scout troop meeting [95]. On 17 Jun 1959 he started his service as a member of the finance committee on Lenox's Board of Selectmen and served as a member until 13 Jan 1966 [96].



*The Berkshires are famous for cultural events such as Tanglewood and its scenic views*

*Professional Career (1945-1965)*

Throughout the remainder of the 1940s until his retirement from General Electric in 1965 William Jerome Rudge Jr. was very active professionally. On 14 Sep 1945, he was promoted to assistant designing engineer in charge of the design of lightning arresters.



[Seated left to right are W. J. RUDGE, G. F. LINCKS, and D. D. MacCARTHY.]

*“MacCarthy, Rudge and Lincks Assigned to New Posts... W. J. Rudge is appointed Assistant Designing Engineer of the Lightning Arrester Section, in charge of lightning arresters, it was announced this week by V. E. Goodwin, Managing Engineer, Lightning Arrester, Cutout and Capacitor... Also a native of North Carolina is Mr. Rudge, for he was born in Monroe. He first came to the Transformer Test Section of the local works, on vacation from his studies at the Massachusetts Institute of Technology in Boston. Within three years of preparation at M.I.T. and one year at Duke University in Virginia [sic], Mr. Rudge graduated with a B.S. degree in 1924 and subsequently earned his Masters Degree. Mr. Rudge was employed in the Lynn River Works as a Test Engineer from the 8<sup>th</sup> of February 1926 until October 4 of that year when he was transferred to the local plant. On May 7, 1928, he joined the Lightning Arrester Engineering Section. With their son William, Mr. and Mrs. Rudge live in Schermerborn Park in Lenox.” (newspaper article published ca. Sep 1945 [97])*

He continued to do a great amount of travel to professional conferences where he and his colleagues regularly gave presentations at AIEE conferences, and also served on professional committees including serving as chair of the committee on protective devices [98]. He was formally registered as a Professional Engineer by Massachusetts Board of Registration of Professional and of Land Surveyors on 10 Jan 1947 [99].

He was appointed to Section Engineer in charge of Design and Development of Lightning Arresters in the Lightning Arrester and Cutout Engineering Division on 1 Oct 1947. His increased status at GE is reflected newsletters where he honors professional accomplishment of colleagues [100, 101].



*W. J. Rudge presents briefcase to Joseph Horvath (31 Oct 1947, Pittsfield Works)*



**William Rudge**

10 Oct 1947, Pittsfield Works

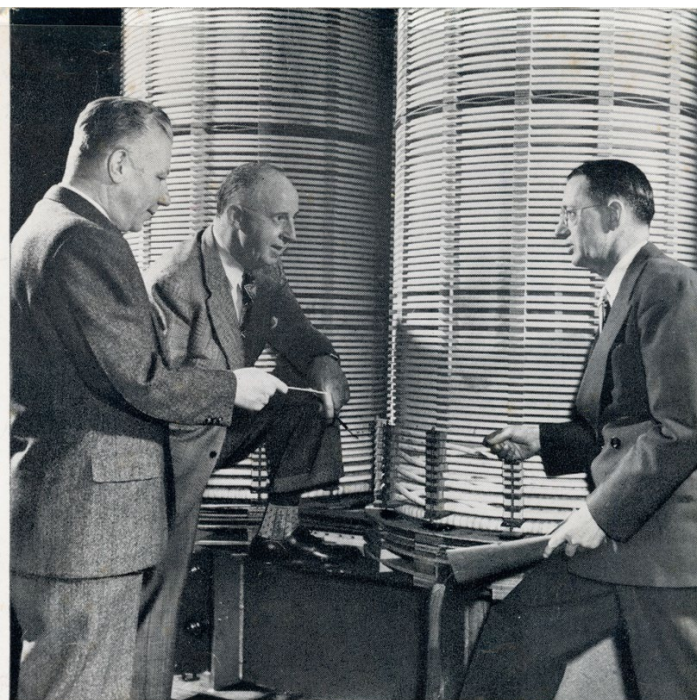
A few years later he was transferred from his role as Section Engineer to Assistant Manager of Engineering on 1 Jul 1950 [102]. A newspaper account for the latter identifies him as a member of the Stanley Club.

*“The Stanley Club was a social club first organized in 1924 by employees of GE in Pittsfield “to promote the social and intellectual welfare of its members.” It functioned under the auspices of GE. The club’s activities included dances, bridge, smokers and picnics. In 1933 the Stanley Club’s membership growth resulted in the organization moving into the Hinsdale Mansion at 54 Wendell Ave., which the owner had planned to raze. With renovations, the club became the site for countless events, parties, weddings, meetings, music, speakers, etc. At its peak in the early ‘50s, the club had over 1,300 paid members. But in 1953 membership began a decline.” Taken from Baby Boomer Memories: The Stanley Club and its legacy” by Jim Schulman, Berkshire Eagle (10 Jan 2020) [online article]*

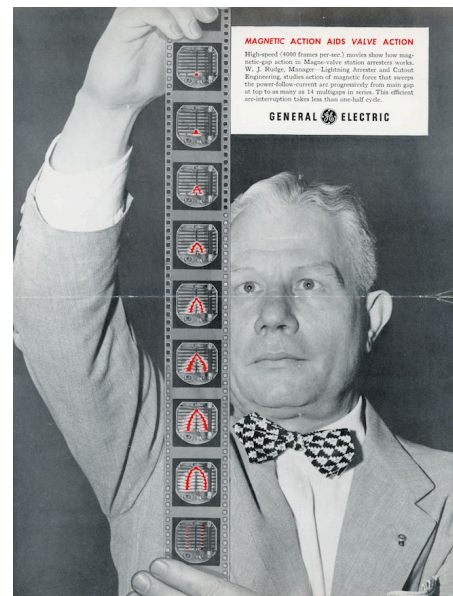
Less than a month later he was promoted to Division Engineer of the Lightning Arrester and Cutout Engineering Division [103]. In 1951 (and from 1955-1956) William Jerome Rudge Jr. appears in multiple marketing photographs for transformers. On 26 Dec 1951 he was honored for 25 years of service at General Electric [104].



*The Stanley Club, 54 Wendell Ave. from 1931-1953*



**J. R. Meador, of G.E.'s Power Transformer Engineering Division (right), points to transformer shielding that controls distribution of voltage stress and helps make possible a reduction in transformer insulation level. Arrester engineers W. J. Rudge and H. M. Towne are at the left.**



*19 Sep 1955 Electrical World*

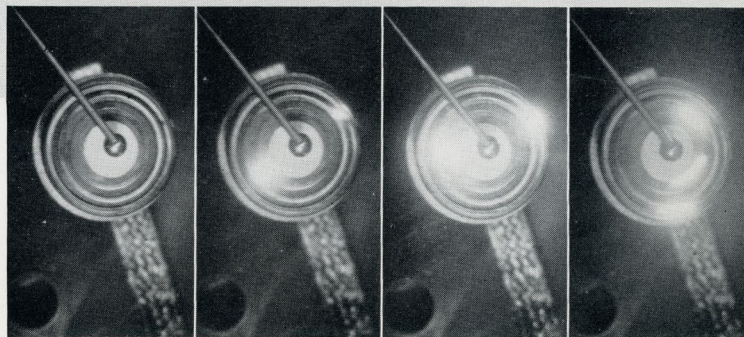
*11 Jun 1951 Electrical World [105]*

**W. J. RUDGE, Mgr**—Lightning Arrester and Cut-out Engineering, points to newly designed Magne-valve gap—the reason for General Electric's smaller, lighter distribution arrester. Both types, directly connected (standing) and externally gapped (on table) use exclusive Thyrite\* Magne-valve operating principle.



**HI-SPEED, EFFICIENT  
ARC INTERRUPTION** →

Movie frames show how rapid rotation of arc and extinction of follow current in less than one-half cycle prevent localized heating—help the new Magne-valve arrester protect against subsequent surges.



Electrical World News . . . Aug. 27, 1956

Electrical World . . . . . Sept. 17, 1956

(432-18)

*27 Aug 1956 Electrical World*

On 18 Jan 1952 William Jerome Rudge Jr. was promoted once more, this time to Manager of the Lightning and Arrester and Cutout Engineering Division [106].

**W. J. Rudge**  
Mr. Rudge received his A.B. from Trinity College and his A.M. from Duke University. He started at G. E. in December 1926, as a cooperative student attending M.I.T. from which he received B.S. and M.S. degrees in 1928.  
Mr. Rudge joined the Lightning Arrester Research Section in Pittsfield in May 1928 remaining there until December 1930. He was a lightning arrester proposition engineer for the next ten years until July 1940 when he was placed in charge of the Lightning Arrester Section. Following a reorganization in September 1945 he was appointed section engineer, Lightning Arresters, which position he held to the present time.  
Mr. Rudge is very active in A.I.E.E. work and has served as chairman of various subcommittees. At present he is chairman of the A.I.E.E. Protective Devices Committee. He is also a member of several American Standards Association and National Electrical Manufacturers Association committees. He belongs to the Stanley Club and is on the Lenox Library Music Committee.  
Mr. Rudge is the author of several technical papers, the latest of which was a joint effort with three other G-E engineers and was presented at the A.I.E.E. summer meeting at Pasadena, California in June.  
Mr. and Mrs. Rudge live at Schermerhorn Park, Lenox. Their son, William, Jr. is a student at Duke University.



**W. J. Rudge**



*William Jerome Rudge Jr. (seated left) celebrates 40<sup>th</sup> year work anniversary of Francis L. Flanagan [107]*



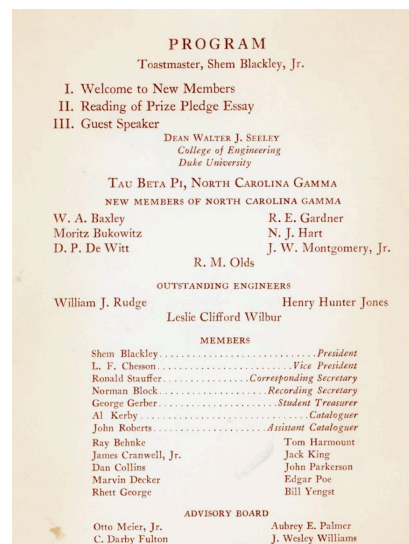
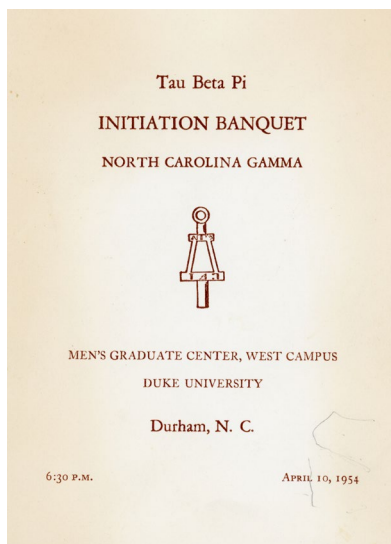
*William Jerome Rudge Jr. (left) at work*

Inducted into Phi Beta Kappa as “Eminent Engineer”

On 10 Apr 1954 William Jerome Rudge Jr. was inducted into Tau Beta Pi, a national honorary engineering fraternity, as an outstanding engineer. The ceremony took place at his alma mater, Duke University (Durham, NC), where his son was a student. At the event he gave a talk entitled “What I Would Do If I Were An Engineer Of 22, But With The Knowledge And Experience Of 52,” in which he presented an optimistic overview of the future and promise of electrical engineering as a career. This was regarded as a tremendous honor and prominently celebrated in the company newsletter [108].



**ELECTED to the Duke University chapter of Tau Beta Pi, national engineering honorary fraternity, as an “eminent engineer,” William J. Rudge, right, manager of lightning arrester and cutout engineering, receives congratulations from Dean Walter J. Seelie of the Duke College of Engineering.**

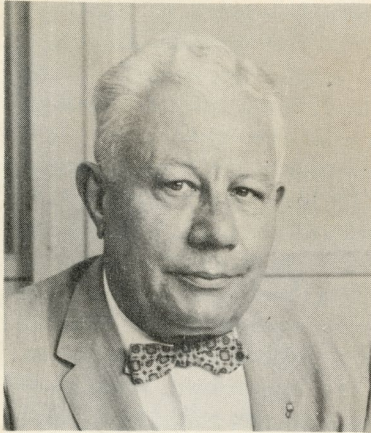




Also occurring in April (from 24 Apr to 4 May 1954) was a curious correspondence between William Jerome Rudge Jr. and the famous parapsychologist, Prof. R. B. Rhine, of Duke University. He sent the professor a letter on behalf of a friend regarding dowsing, or the ability of someone using a forked stick to predict where underground water is located. In his cover letter, William Jerome Rudge expresses a polite interest in parapsychological phenomena, such as thought transfer. [109a]. He gave another talk as a distinguished alumnus at Duke's homecoming the following year on 21 Oct 1955 [109b].

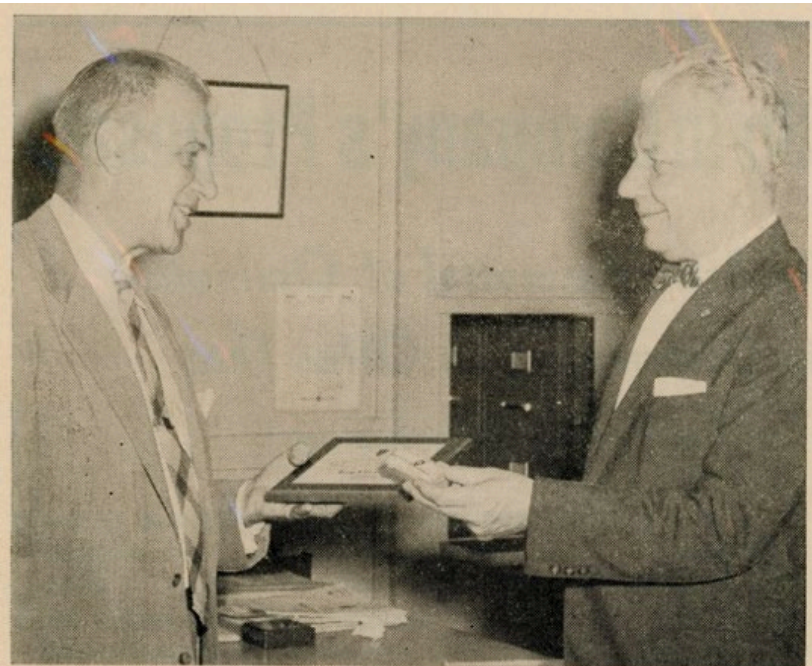


William Jerome Rudge Jr. was named Manager of Engineering in connection with the formation of a second production section for lightning arresters and cutouts on 31 Dec 1956 [110].



**WILLIAM J. RUDGE**  
Manager—Engineering  
Lightning Arrester & Cutout Product Sect.  
Distribution Transformer Dept.  
Pittsfield, Massachusetts

Bill was born in Monroe, North Carolina in 1902 and graduated from Trinity College with BA in 1924, from Duke University with AM in 1925, and Massachusetts Institute of Technology with BS and MS in 1928. Joined General Electric in 1926 and went with Lightning Arrester Development Engineering in 1928. Transferred to Lightning Arrester Application Engineering in 1930 and was in charge of Lightning Arrester Design Engineering from 1940 until 1945 when appointed Assistant Design Engineer in Lightning Arrester Engineering. Became Section Engineer—Lightning Arrester Engineering Section in charge of design in 1946 and Section Engineer—Lightning Arrester Engineering in charge of design, development and application in 1947. Appointed to present position in 1950. Member of IEEE, ASA, NEMA, NFPA and PGEA. Home address is Schermerhorn Park, Lenox, Massachusetts.



**PLAQUE PRESENTATION** is made to G. Fred Lincks, a standards engineer in Distribution Transformer's LACO section, (at left) by William J. Rudge, manager of LACO product engineering, in observance of Lincks 40 years of service with General Electric. Mr. Lincks, a native of Jersey City, N. J., is a graduate of Pratt Institute in New York. His employment at GE began in 1920 at Schenectady, where he was employed as a test engineer. He then transferred to the Pittsfield testing section and became associated with LACO in 1922. Also present for the ceremony were D. W. Lynch, LACO general manager, and Stanley E. Hood, president of the Quarter Century Club.

During the first half of 1964, the Pittsfield General Electric Plant was extensively renovated [111]. On 6 Jul 1964, apparently in connection with these and other administrative changes, William Jerome Rudge Jr.'s title was changed to Manager of Engineering of the new Distribution Protective Equipment Department (DPE) [112].

*26 Aug 1960 Article from Pittsfield General Electric Works (Pittsfield, MA)*

Vacations

In the course of his busy career, William Jerome Rudge Jr. and his wife did occasionally have opportunities to vacation in connection with the travel he took to professional conferences [113]. They visited Atlantic City in New Jersey sometime in 1952 (as noted on the date on one of the images below) and in Nov 1959 (according to their 1959 Christmas newsletter). These photos don't appear to have been taken at the same time.



*Center: Anne nee Wyss Rudge*

*The writing on the bottom of the photo reads "Al Boehner [?], Wow!! Max Alimansky, Ray Smith 11/10/52"*



*Seated left: G. Fred Lincks [?], M. Alimansky [?]*

*Seated right: Anne nee Wyss Rudge and her husband, William Jerome Rudge Jr.*

Four visits (1954, 1955, 1959, 1960) to Hot Springs, VA are included among his surviving papers.



On the back of this photo it reads "STEPHEN BLAKE, PHOTOGRAPHER, THE HOMESTEAD, P.O. BOX 504, HOT SPRINGS, VA"



Outdoor pool, The Homestead, Hot Springs, VA

*"We returned from Hot Springs last night. We were very fortunate in having good weather for the trip and very little car trouble. Your mother had one hell of a time—she was the bell of the ball and for two evenings danced blisters on both feet and came back asking for more. The hotel at Hot Springs is a very swank affair and very expensive, and I am sure that she had a good time because all the way back all she could talk about was what she would do next year when she was down there again. I can see what I'm in for from now on... white jacket and bow ties. Of course, we have Atlantic City to go to next fall, so she is beginning to get around. We are trying to crystalize our plans for the house at the lake, but will know more about that next week after I get a chance to talk to the architect."* Letter from WJR jr. to his son, Bill J. (7 May 1954)



*Their visit to Hot Springs in 1959 (probably the source of the upper left photo) was written up on a local newspaper (12 May 1959 Berkshire Eagle (Pittsfield, MA) p. 6)!*

*Right: Anne Wyss Rudge in same dress (dev Jun 1967)*



These two photos are taken from a photo album that identifies them as having been taken at the Homestead, Hot Springs on May 1<sup>st</sup>, 1959.

Both of these photos were made by a professional photographer at the Homestead, Hot Springs, VA.



*William Jerome Rudge Jr. and his wife are seated on the right side of the table, closest to us.*



*William Jerome Rudge Jr. is the man in the center, his wife Anne is to his right.*

## Starts Retirement

William Jerome Rudge Jr. formally retired from General Electric on 1 Feb 1965 [114]. Vice President of G.E. Robert L. Gibson wrote him a brief letter of thanks for his service:

"I want to tell you again what a fine contribution you made to the General Electric Company and what a great guy I think you are. You are the type of man who really 'made' the General Electric Company. Year in and year out you did a fine job and in recent years carried a very significant responsibility. Moreover, you have made an excellent record as Manager of Engineering for the Distribution Protective Equipment Department and for its predecessor, the LACO Product Section. I hope you have a happy and thoroughly enjoyable retirement. (Letter from Robert Gibson to WJR jr., 5 Jan 1965)

# Rudge Retires February 1 As DPED's Eng. Manager

William J. Rudge, who started to work here in 1928 as an MIT cooperative student, will retire February 1 as manager of engineering for the Distribution Protective Equipment Department.

He will retire at 62 under the optional retirement feature of the G-E Pension Plan. He has already completed his duties and is now on vacation.

A native of Monroe, N.C., Rudge joined the lightning arrester section as an engineer while he continued to study at



BS from MIT while working as a

Massachusetts Institute of Technology for his MS degree. Rudge had previously earned a BA degree from Trinity College, MA from Duke University, and a

test engineer in GE, Lynn. He received his MS from MIT in 1928.

### **Named Section Engineer**

Rudge was an application engineer from 1930 to 1940, when he was named a design engineer. In 1945 he was promoted to manager of engineering for the newly formed lightning arrester and cutout section of the Distribution Transformer Department. He was named to the same position in the Distribution Protective Equipment Department shortly after its formation in 1964.

### **Active in AIEE**

Rudge was active in AIEE (now IEEE), and served as chairman of various subcommittees.

He is a member of several American Standards Association and National Electrical Manufacturers' Association committees, and was chairman of NEMA's protective devices section.

He has also authored numerous technical papers.

He was honored in 1954 with election to the Duke University chapter of Tau Beta Pi, national engineering honorary fraternity.

Retirement was an opportunity for William Jerome Rudge Jr. and his wife to, among other things, take longer vacations. Two of these for which we have primarily photographic evidence were to Palm Beach, CA. One of these took place in 1966, as evidenced by multiple photographs that were developed in March and April of 1966. Included in this first trip were his wife's sister, Milda Elizabeth nee Wyss Miller and possibly William Jerome Rudge's old graduate school roommates (Howard O. and Homer H. Woods) as depicted in the lower right photograph below.



According to a surviving pocket calendar, the second trip to Palm Desert in 1967 took place from 17 Jan – 22 Mar 1967. On this trip William Jerome Rudge Jr. and his wife were accompanied by both Milda and her daughter-in-law, Beverly nee Tanis Miller.



*Shots of Palm Desert Lodge, the motel they stayed at both times*



*Beverly Tanis Miller, Milda nee Wyss Miller and William Jerome Rudge Jr.*



*Milda nee Wyss Miller and her sister Lena Anne nee Wyss Rudge.*



*William Jerome Rudge Jr. swimming*



*Unidentified couple and William Jerome Rudge Jr.*



*Anne Wyss Rudge's brother, Lionel Wenzel Wyss and his wife Cecile C. nee Johnson Wyss also accompanied them*

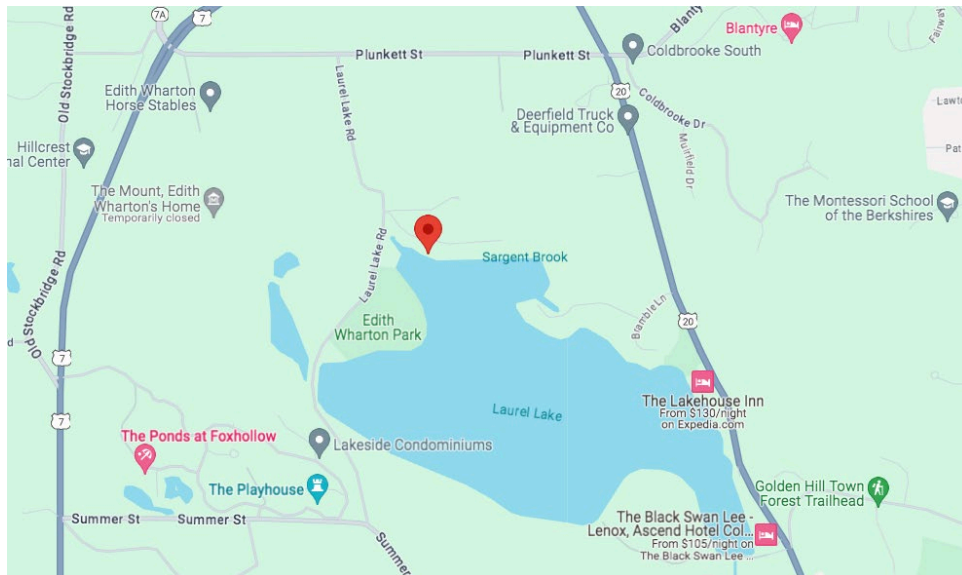
*“Hi Fi”*

**Hi Fi** by Anne Wyss Rudge

There was a time when we built Hi-Fi  
On moon-lit nights I would lie  
In the hammock looking up at the sky  
Thru the trees reciting poems like these  
“Wind in the pine”

The moon was a ghostly galleon tossed up on cloudy seas  
Now years later I lie shaking with terror  
As the wind rushes by  
And crushes all the things I hold dear!  
And I pray watch over me God  
Don't let the trees fall

And quote the end of Joyce Kilmer's beautiful poem,  
To end this one,  
Poems are made by fools like me, but only God can  
make a tree



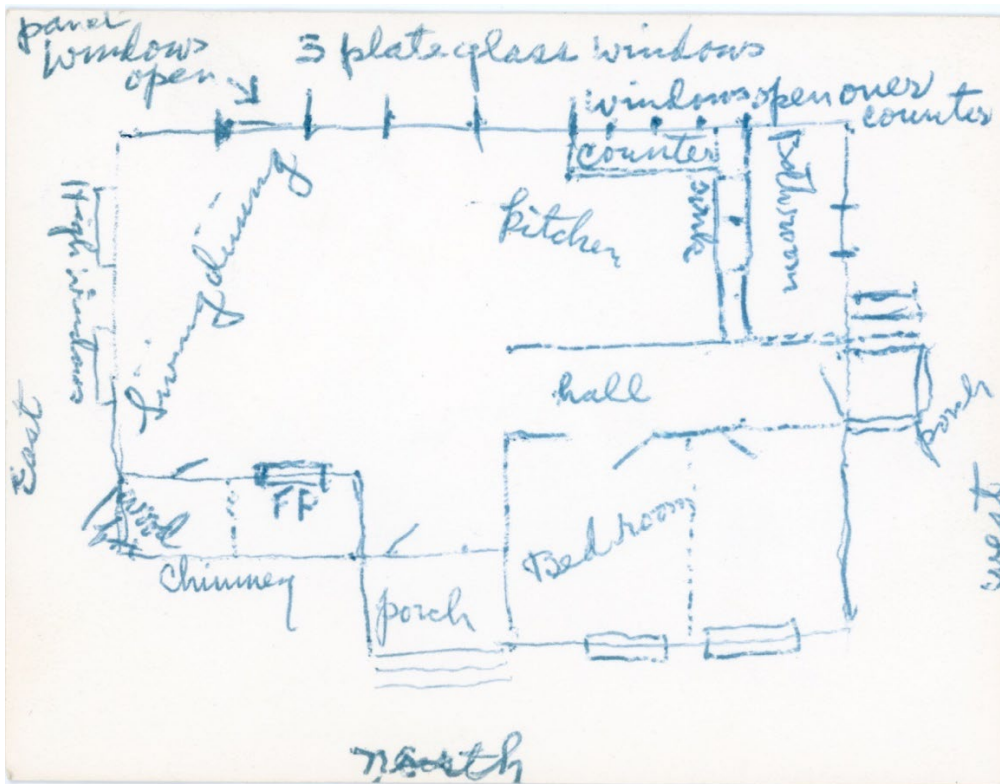
*Photos of cottage taken ca. 1954*



On 13 Jul 1953 William Jerome Rudge Jr. and his wife purchased lots 9 and 10 on Laurel Lake in Lenox, Berkshire Co. MA with the idea of building a small cottage [115]. The original design for the cottage as a “ranch type affair” with the “whole lake side made of windows” came from an issue of *American Home*. They worked with an architect and began construction in earnest in June 1954, during the brief interval between his son’s graduation from college and his Army deployment later that year [116]. They were granted a permit to build the cottage that summer [117]. A Christmas newsletter sent out later that year (below) indicates work on construction proceeded quite rapidly. Indeed, on 15 Sep 1954 they hosted beach cook out for a Kiwanis meeting that featured a visit from an Australian bishop [118].



Color photo of cottage developed Aug 1954



The cottage initially included a large living/dining area, a small kitchen, a fireplace, a small bathroom, and two bedrooms. A folding wooden wall separated the two bedrooms. At first they had a canoe and probably a row boat. It was used exclusively during the summer from May to late September.

Multiple photos of the cottage taken ca. 1956



*William Jerome Rudge Jr. and his wife Anne*



*View from inside the cottage looking out to Laurel Lake*



*Event that took place at the cottage presumably in the mid-late 1950s. Anne Wyss Rudge is the woman to the left on the first two photos, her husband, William Jerome Rudge Jr. might be the man piloting the boat in the third photo below.*



William Jerome Rudge Jr. continued to enhance the cottage throughout 1955. In May he introduced a drain pipe into the basement and also a stereophonic sound system (hence the cottage's name "Hi Fi"). His colleagues at G.E. created a metal grill with an aluminum cooking cover and provided a picnic table, which was introduced after some landscaping was completed. In June his wife arranged to have the floor of the cottage sanded and waxed. They also replaced a small motor on their motor boat, and also putting in a load of sand on the beach [119].



*View of Laurel Lake (taken summer of 1959)*

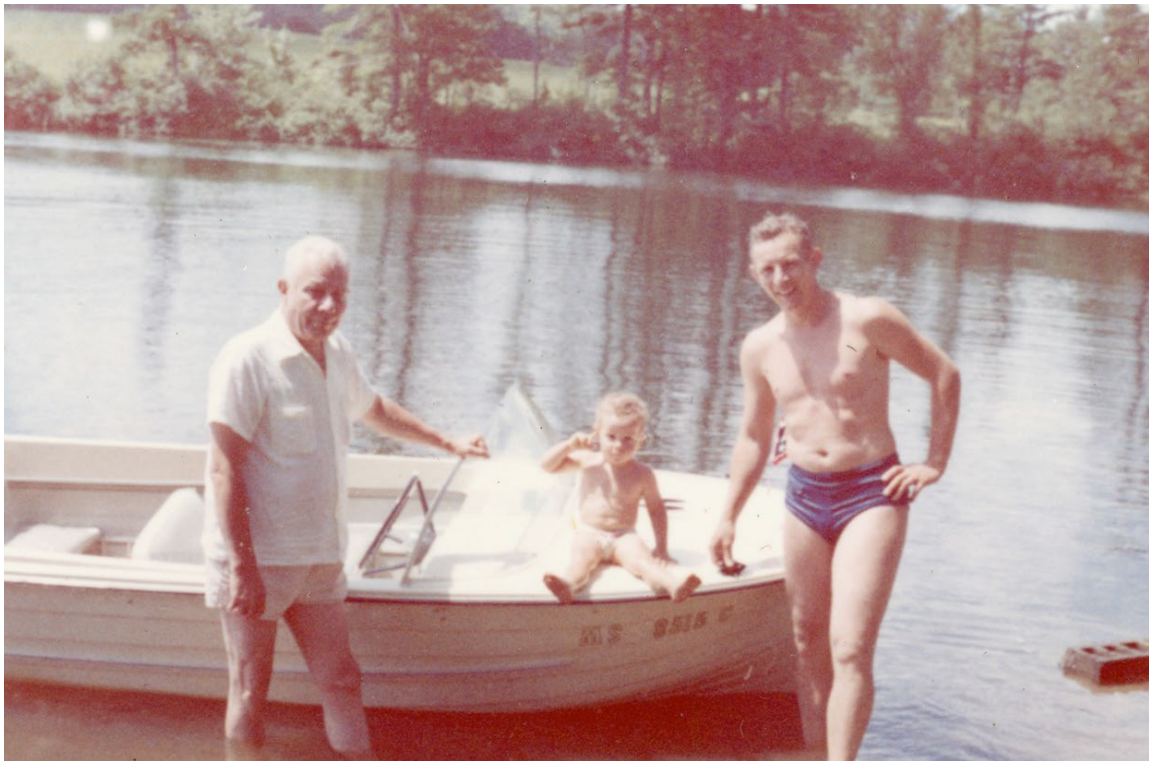


*Photos from a lobster cookout (taken summer of 1961?)*

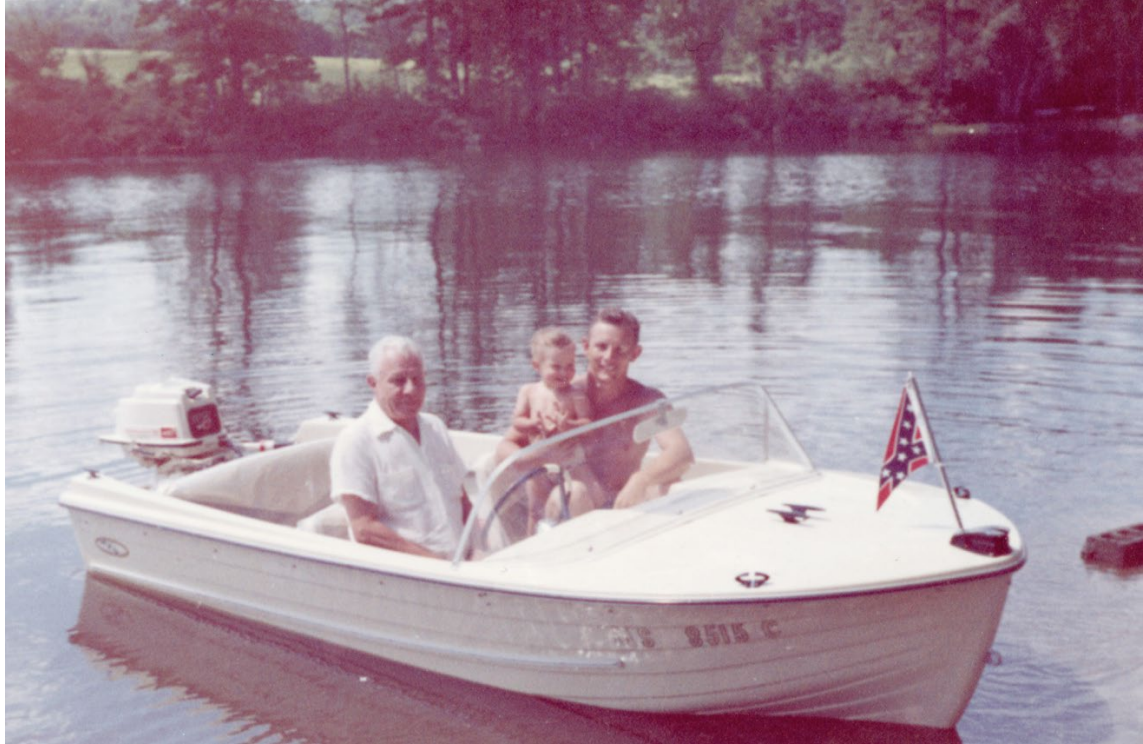
*Pictured are William Jerome Rudge Jr., his wife Anne, son William Jerome Rudge III and grandson, William Jerome Rudge IV*



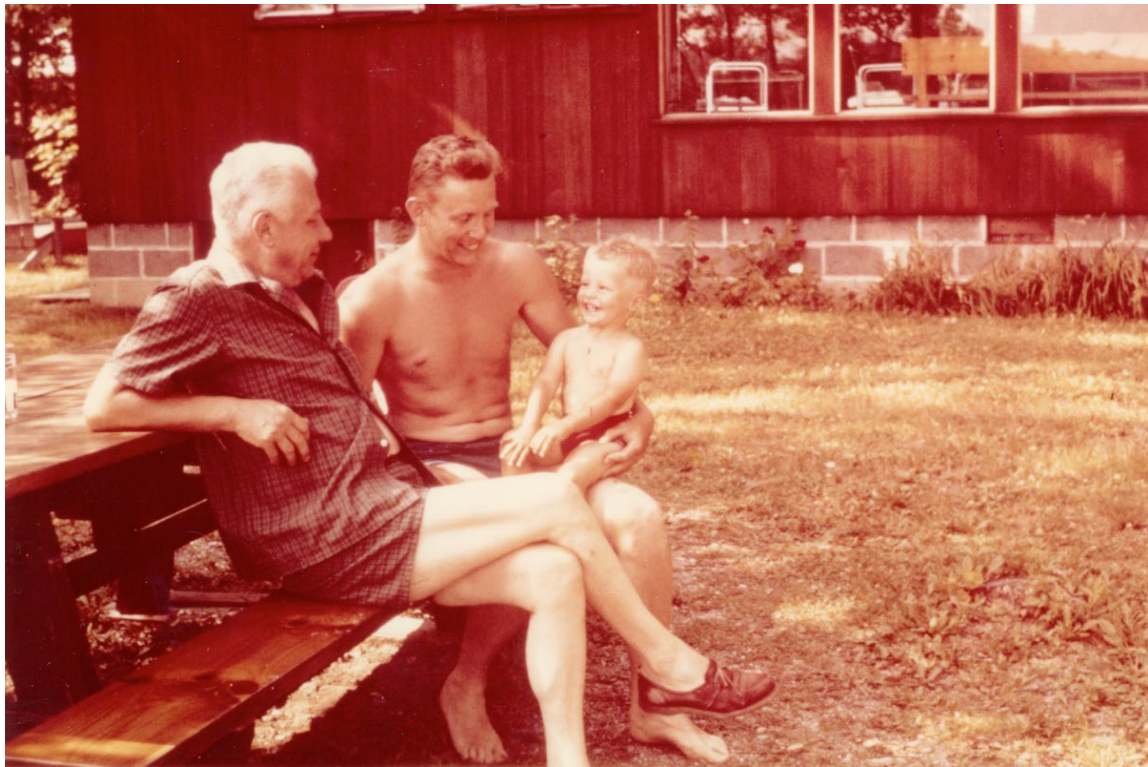
*Cottage (back of photo indicates it was developed in Oct 1962)*



*William Jerome Rudge Jr., his William Jerome Rudge III and grandson, William Jerome Rudge IV ca. 1962*



*William Jerome Rudge Jr., his William Jerome Rudge III and grandson, William Jerome Rudge IV ca. 1962*



*William Jerome Rudge Jr., his William Jerome Rudge III and grandson, William Jerome Rudge IV ca. 1962*



*William Jerome Rudge Jr. and grandchildren Laura and Billy (developed Aug 1962)*



*Inside of cottage taken ca. Dec 1962*



*Bill Rudge III and wife canoeing (dev Sep 1963)*



*Bill J. IV, David and Laura Rudge (dev Sep 1963)*



*Anne Wyss Rudge (dev. Sep 1963)*



*Laura Rudge and her brother William Jerome Rudge IV (dev Oct 1963)*



*William Jerome Rudge Jr. and his grandchildren (photo developed Aug 1963)*





*Frances "Fran" nee Adams Hopper., her daughter Martha Hopper and her cousin William Jerome Rudge Jr. ca. 1964*

Yearly deliveries of sand led to the sandpile becoming a more prominent feature on the beach.



*Laura, David and Billy Rudge (dev Sep 1964)*



*William Jerome Rudge III, his wife and children (dev Jun '67)*



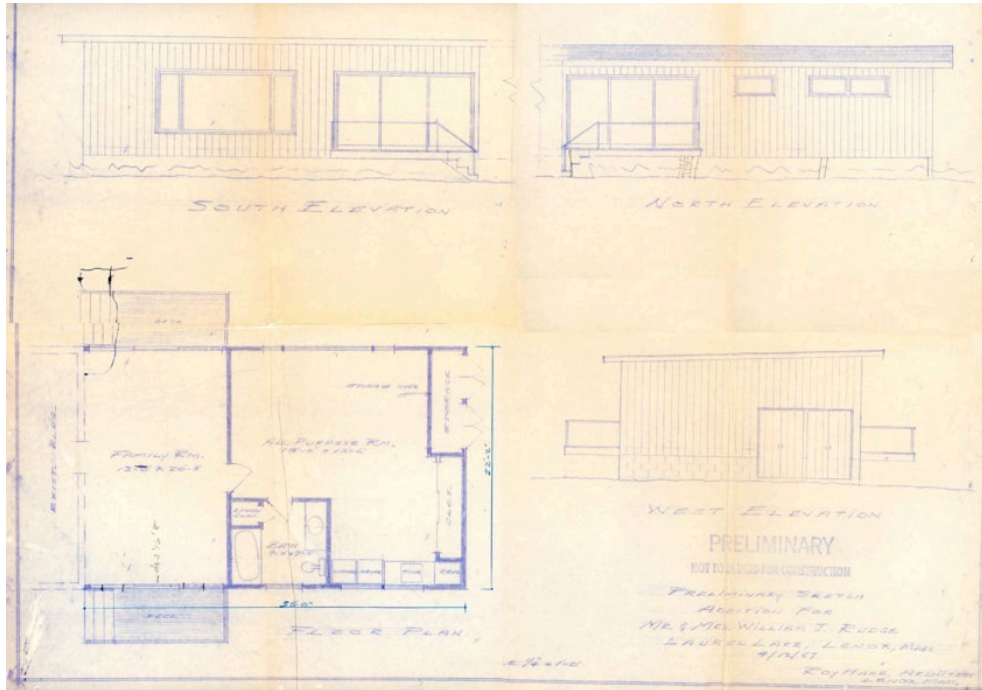
*Hi-Fi (Fall 1966)*



*William Jerome Rudge III and his four children: Laura Anne, Susan Elizabeth, David Wyss and Billy Rudge IV steering the boat*

### Extension

Starting in the Spring of 1967, William Jerome Rudge Jr. began work on extending the cottage, essentially doubling its size. It included the creation of a large middle room with porches extending from both the front and back, and a master bedroom. The middle room had two low sofas. The master bedroom area was relatively large and included a large full bathroom and a laundry area with a washer and dryer. The bedroom had a small secret compartment, and also a small refrigerator. Electric heat was installed. A shed assessable from the outside was also introduced [120].



*Preliminary blueprint for cottage extension, dated 12 Apr 1967*



*Photo developed Jun 1967*



*William Jerome Rudge III, his wife and their four children (dev Jan '68)*



*Shot of laundry area in master bedroom (dev Jan 1968)*



*William Jerome Rudge Jr. (dev Dec 1971)*



*Laurie, Susan and Billy Rudge (dev Sep 1967)*

In 1967 William Jerome also introduced a small green metal shed that was used to store wood and life preservers for use with the boats.



*William Jerome Rudge's grandchildren: David, Susan, Bill and Laura (and their dog Copper) (dev Oct 1971)*



*William Jerome Rudge Jr. (dev Jan 1968)*

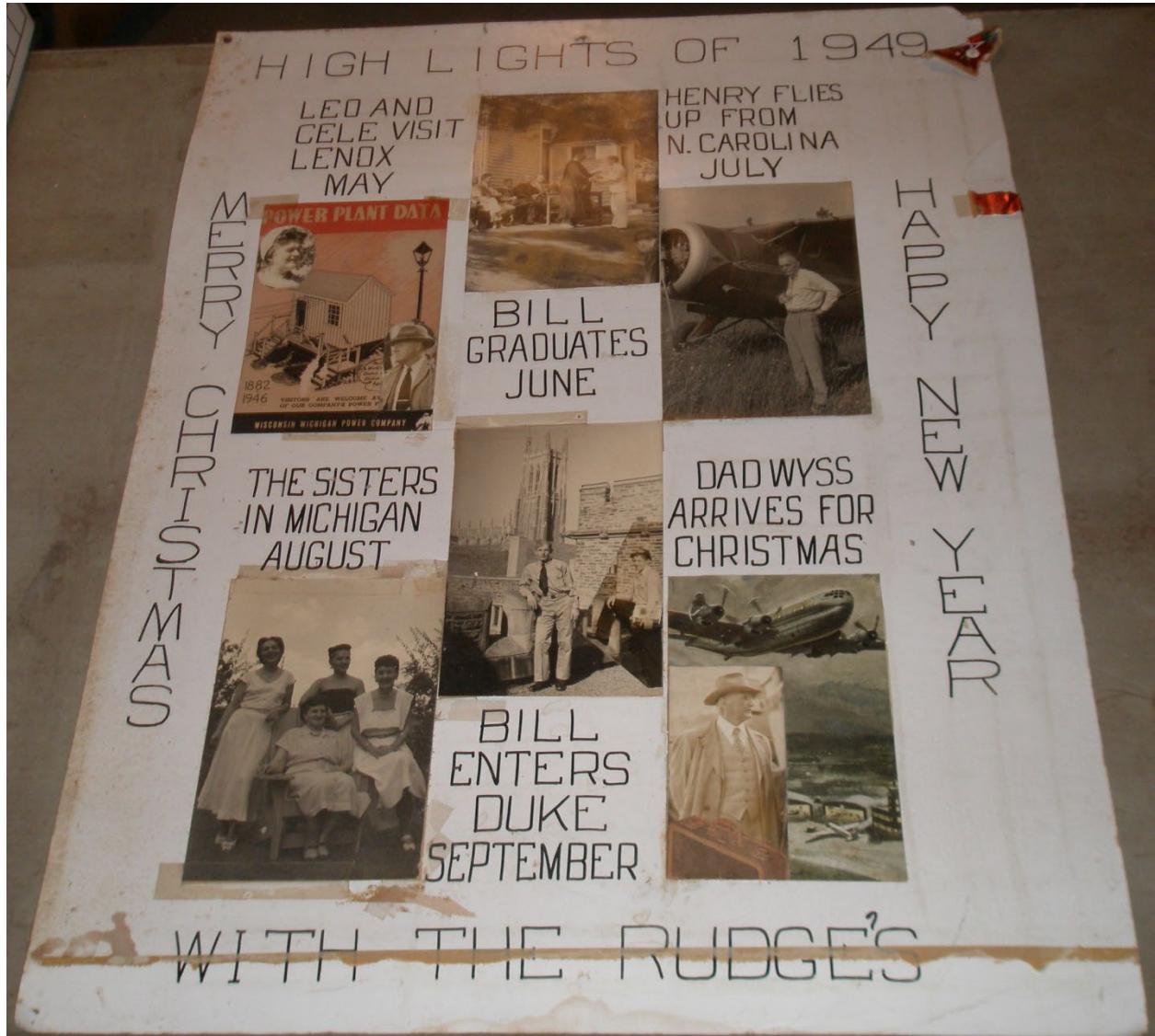
**Untitled Poem** by Anne Wyss Rudge

The sun is sinking in the west  
 And all the birds are going to rest  
 I wish they would change their tune  
 And not chirp up till noon  
 A pair of song sparrows  
 Built a nest in the lilies  
 Under the picture window.  
 Giving me the willies  
 Spider webs are hanging  
 A hornet nests need spraying too  
 But spray I do not dre  
 For fine little birds are under there  
 Mama and Papa are busy as can be  
 Bringing food as we can see  
 Bill and I watch constantly

To scare away the enemy  
 I'm afraid "Copper" would be held at bay  
 If he were here to-day  
 I had a sunbath, the  
 second of this year  
 Went for a swim  
 The water was lovely + clear  
 Then Bill that dear man of mine  
 fixed a salad plate very fine  
 And we drank a toast to all  
 of you we hold so dear  
 And wished you could be with us here  
 We are looking forward to 4<sup>th</sup> July  
 When our kids will be coming by  
 To light up Hi-Fi!

Christmas Newsletters

We have a poster (shared as a photograph) and three surviving newsletters that William Jerome Rudge Jr. and his wife sent out that include additional information about their many activities during the years 1949, 1954, 1959 and 1965.



# MAIN EVENTS - RUDGE'S 1954

January  
Bill J takes off  
for Duke



February  
Anne has a birthday  
Never mind which one  
Lincoln made it  
Famous and it  
was fun.



March  
Our 24<sup>th</sup> anniversary  
on the 24<sup>th</sup> day  
Once in a life time  
It comes that way



April  
Bill initiated  
T A N  
"eminent" engineer  
DUKE-U  
Durham, N.C.



May  
At the Homestead in  
Hot springs Virginia  
We basked in the sun.  
Dined and danced  
And had fun



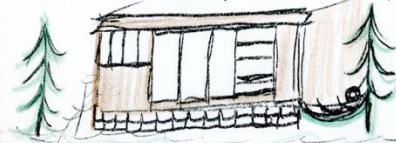
June  
Bill J. graduated  
on the 6th day  
then to Michigan  
He and Anne  
Went away



July  
We start a cabin  
On Laurel Lake  
Where we can  
Swim and bake



August  
Now the cabin is  
Finished and named  
Hi-Fi and there  
For vacation we Hie



September  
Cooking on the beach  
Music in the air  
Canoeing in moon-lite  
The weather was fair



October  
Bill J goes south to the  
Duke-Army game.  
Anne and Bill promena-  
de in Lenox  
Kiwanis Parade



November  
The army sends greetings  
to Bill J  
And so to Fort Dix  
He is on his way  
Pvt-1 William Rudge  
US 51295402  
Company K  
272 Infantry Regiment  
Fort Dix, New Jersey




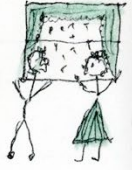










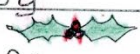
December









# THE RUDGE'S NEWS LETTER 1959

<p>January</p> <p>Making the usual Vow at this time to write more Letters in fifty nine.</p> 	<p>February</p> <p>The shortest month and the sweetest too</p> <p>Birthdays and Valentines</p> <p>We love them Don't you?</p>   	<p>March</p> <p>Now we say Each day Spring is on The way The winter is past <u>This</u> snow wont last.</p> 
<p>April</p>  <p>Kiwanis Horse show was a Big EVENT But it rained And rained and We wished for A tent</p>	<p>May</p>    <p>Again at Hob Springs We were happy to be Then to Raleigh Bill's mother and Sister to see It was fun to be With the family</p>	<p>June</p>  <p>The month of Roses They say But for us it means The day We get out the boat The canoe + the float And open Hi-Fi For the Season</p>
<p>July</p>  <p>From Cincinnati to Syracuse the GK moves Bev + Bill so they're Closer this way This is vacation break So we're off to the lake Take off our shoes Let down our hair And Bathing suits wear</p>	<p>August</p>  <p>Hot weather made Us happy here With long sunny Days to treasure Bill and Bev Came a few days To add to Our pleasure</p>	<p>September</p>  <p>Blow the bugle and Sound the horn On the 10th day William the IV Is BORN Seven pounds 3 ounces A handsome boy Being Grandparents Is truly a Joy</p>
<p>October</p>   <p>We went to Michigan by air To celebrate Papa Wyss's Birth day there 89 years and Looking so fine He could easily Pass for 69</p>	<p>November</p>  <p>To Atlantic City For a brief stay Wonderful weather With Sunshine Each day The first visit home Of our Grandson Made thanksgiving time A happy one</p>	<p>December</p>  <p>Another wonderful year Is ending And to you Hearly Greetings we're sending We hope this New Years eve To be spending Baby sitting, what a Happy Ending Bill + Anne</p> 



1965 COUNT DOWN -- THE RUDGES



JANUARY -- THE RUDGES had a happy Holiday Season with 4 Grandchildren a very good reason. Not much snow but zero below.

February - Bill retired from General Electric with regret after 38 years it's hard to forget, he needed a rest and thought it best to take time to seek a warmer climate so we started South, the weather was fine. stopped to see Dear folks in North Caroline.

MARCH -- Arrived at Clearwater Beach to bide with Cliff Davis our "sightseeing" guide Friends from the Park we were happy to see also, at Sarasota, old friends from G. E. At Warm Mineral Springs we swam and basked in the sun very relaxing and fun.

APRIL - Started North up the coast, liked Jekyll Island the most so beautiful and clean. At Myrtle Beach the weather was mean! Elizabeth City was next on the list, visiting the Kings we wouldn't have missed. The trip to Nag's Head we will never forget - lots of fun but we can taste sand yet. Then on to Williamsburg, an experience to treasure for history and beauty beyond measure.

MAY -- It's nice to roam but good to be home!

JUNE -- Busy house cleaning - the yard gleaming, opening cottage on Laurel Lake, another yard to rake.

JULY - Besides the celebration on the 4th day we had Susan Elizabeth's 1st birthday and Bill transferred to the G. E. Knolls Lab, Commuting until a home could be had. Billy and Laurie came for a stay and enjoyed camp at Berkshire Country Day.



August - The days were hot and dry and the lake went down so low none of our boats could go.

SEPTEMBER -- After Labor day Bill and Bev moved from Syracuse away to a new home at no. 10 Santa Lucia Court, Clifton Knolls Elnora, N. Y. It's a few miles north of Schenectady we are happy they can nearer be. Billy was six on the 12th day and in the first grade away.

OCTOBER - The leaves started falling and we had to say goodbye to our camp HI-FI. Bill reads Hitchcock, Stout, Fleming and Queen and does gourmet cooking in between.

NOVEMBER -- Busy month and cold, on the 14th day Laurie was 5 years old Thanksgiving, turkey and sage and on the 29th David Wyss was 3 years of age. Now we turn the page to

DECEMBER - Looking forward to hearing from friends far and near Wishing you a Merry Christmas and a Happy New Year The latch is always out for you here.



Anne + Bill

*Final Years*

William Jerome Rudge's final years included regular visits to the cottage in July and August by his son's family and occasional visits by other friends and family [121]. He and his wife regularly spent Christmas with his son's family.



*William Jerome Rudge Jr., his wife and grandson William Jerome Rudge IV (late 1959)*



*Three generations of Rudge men: William Jerome Rudge Jr., III and IV (late 1959)*



*William Jerome Rudge Jr. taking a photograph of his grandson, William Jerome Rudge IV (Christmas 1960)*



*Rubie nee Breikreutz Graffunder (Bev's cousin) holding David Rudge, Frank Graffunder holding Bill J. Rudge IV, Beverly nee Cook Rudge holding Susan Rudge, Laura nee Breikreutz Cook, Jack Graffunder holding Laura Rudge, and William Jerome Rudge Jr. (Rudge children christening 8 Nov 1964)*



*Laura Adele nee Breikreutz Cook (Bev's mother), Laura, Beverly, Bill IV, Bill III holding David, and William Jerome Rudge Jr. holding his granddaughter, Susan Elizabeth Rudge (Christmas 1964)*



*William Jerome Rudge III, his father William Jerome Rudge Jr. and his children, David Wyss Rudge  
 Laura Anne Rudge, Susan Elizabeth Rudge and William Jerome Rudge IV Father's Day (18 Jun 1967)*



*Back: Anne nee Wyss Rudge, William Jerome Rudge Jr., Beverly Anne nee Cook Rudge, William Jerome Rudge III  
 Front: Laura nee Breiterentz Cook, Laura Rudge, Susan Rudge, William Jerome Rudge IV, David Rudge (Christmas 1967)*



*Susan Elizabeth Rudge's birthday 11 Jul 1968*



*William Jerome Rudge IV and his grandfather, William Jerome Rudge Jr. watching the Apollo 11 moon landing on 16 Jul 1969.*