

Memories From the SEAS Time Capsules

The Fifth Decade: 1905-1914



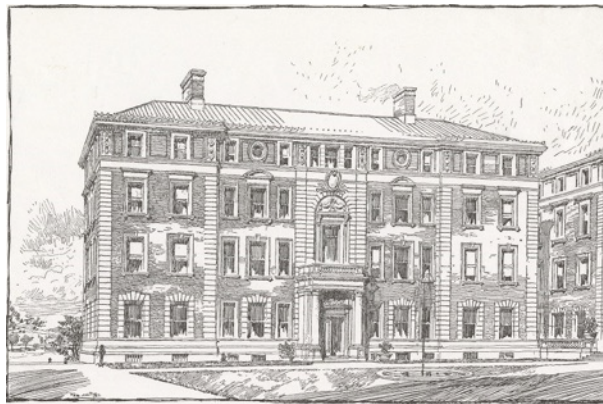
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From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1905 – School of Mines building on the Morningside campus is completed.
 - The School expands from the Engineering Building (now known as Mathematics) which had been its primary home since 1897.
- In 1961, when the School moves to the new Mudd Building and General Studies moves in, the Mines Building is renamed Lewisohn Hall after Adolph Lewisohn, who helped fund the building's construction.
- Shown in 1908; in the upper right photo it is in the center with Earl Hall to the right.



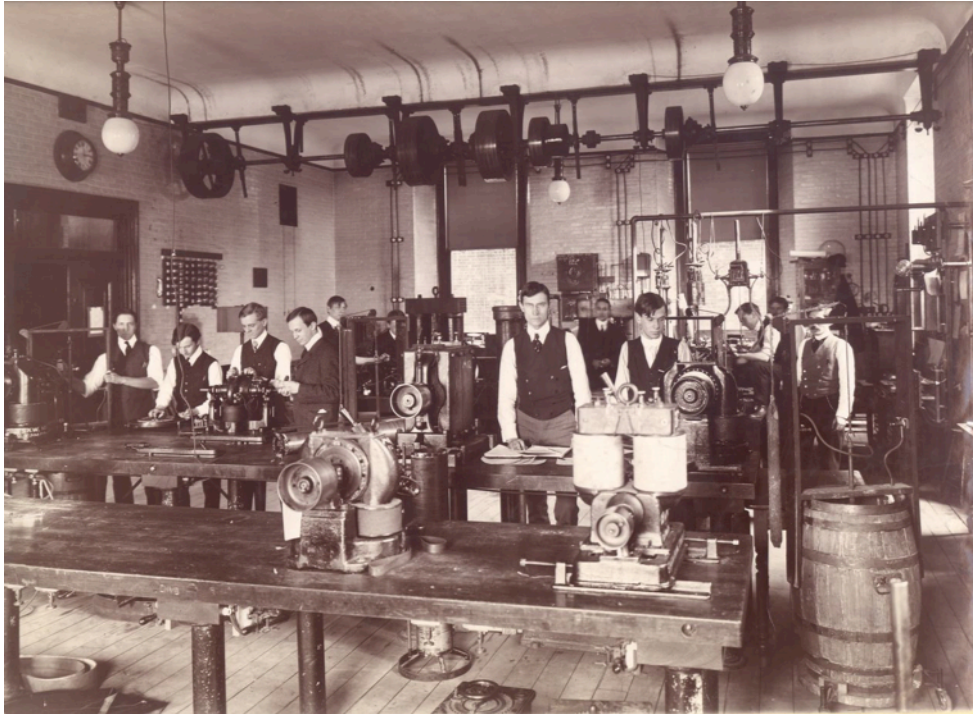
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The Fifth Decade: 1905-1914



- Class of 1905.



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New York Moments

The Fifth Decade: 1905-1914



- Sightseeing in New York City in 1905.



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New York Moments

The Fifth Decade: 1905-1914



- New York City docks in 1905.

150



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New York Moments

The Fifth Decade: 1905-1914



- 1905 – Coney Island's Luna Park.



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From the SEAS Time Capsules

The Fifth Decade: 1905-1914

SCHOOLS OF MINES, ENGINEERING AND CHEMISTRY

1907-1908

UNIFORM CURRICULUM FOR FIRST CLASS

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9-10	Physics 3, 4	Physics 5, Civil Engineering 2	Physics 3, 4	Physics 5, & Phys. Ed. A	Physics 3, 4	Chemistry 3, Civil Eng. 2
10-11	Mathematics 3, 4	Chemistry 6, Mathematics 3	Mathematics 3, 4	Chemistry 6, Mathematics 3	Mathematics 3, 4	Chemistry 6, Chemistry 4
11-12	Chemistry 3, 4	2 Phys. Ed. A (Gym.) Drafting 4, 10, 30, 40, 50 M	Chemistry 3, 4	2 Phys. Ed. A (Gym.) Drafting 4, 10, 30, 40, 50 M	Chemistry 3, 4	Chemistry 6, Drafting 4
1-2	Drafting 2	2 Phys. Ed. A (Gym.)				
1-4	Chemistry 6, Lab. Drafting 2	Chemistry 6, Lab. Drafting 2	Chemistry 6, Lab. Drafting 2	Chemistry 6, Lab. Drafting 2	Chemistry 6, Lab. Drafting 2	

COURSE IN MINING ENGINEERING

SECOND CLASS						
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
9-10	Chemistry 6, 6E	Civil Eng. 6, Chemistry 6E	Chemistry 6, 6E	Drafting 5, Chemistry 6E	Chemistry 6, 6E	Civil Eng. 6E
10-11	Math. 3-6	Elec. Eng. 1	Math. 3-6	Elec. Eng. 1, Elec. Eng. 2	Math. 3-6	Drafting 5, # Chemistry 6E
11-12	Physics 3, Mechanics 10E	Geology 3, 4, Mineralogy 1-3	Physics 3, Mechanics 10E	Geology 3, 4, Mineralogy 1-3	Physics 3, Mechanics 10E	Geology 3-5
1-2	Phys. Ed. B, Gym.				Phys. Ed. B, Gym. Mineralogy 1-3	
1-4	Civil Eng. 6E, Chemistry 6E, Lab.	Drafting 7, Chemistry 6E, Lab. Mineralogy 1-3, Lab.	Drafting 7, Chemistry 6E, Lab. Mineralogy 1-3, Lab.	Drafting 7, Chemistry 6E, Lab. Mineralogy 1-3, Lab.		Physics 6E, Lab. Chemistry 6E, Lab.
2-5	Physics 6E, Lab. Chemistry 6E, Lab.	Mineralogy 1-3, Lab.			Drafting 7, Chemistry 6E, Lab. Mineralogy 1-3, Lab.	

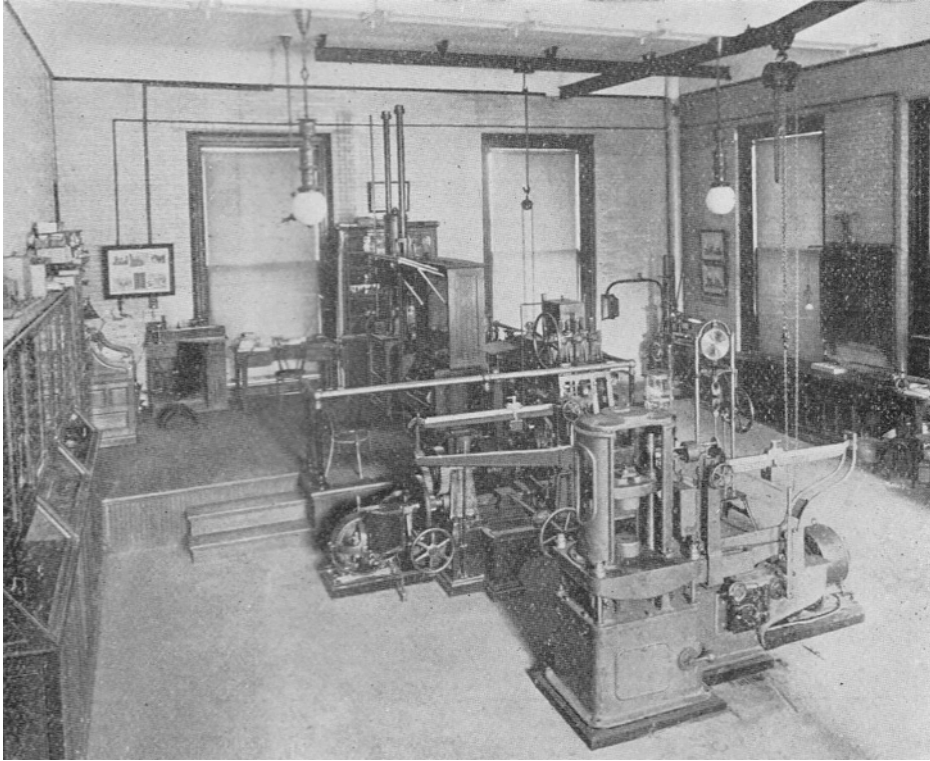
THIRD CLASS						
9-10	Civil Eng. 3E, 3E	Mining 3E	Civil Eng. 3E, 3E	Mining 3E, Mining 3E	Civil Eng. 3E, Mech. Eng. 1E	Mining 3E, Mining 3E
10-11	Mechanics 10E, 3E Mining 3E	Geology 10E-10E	Mechanics 10E, 3E Mining 3E	Geology 10E-10E, 3E Mining 3E	Mechanics 10E, 3E Mining 3E	Geology 10E-10E
11-12	Metallurgy 1, Metallurgy 2E, 3E	Mech. Eng. 3E, Elec. Eng. 3E	Metallurgy 1, Metallurgy 2E, 3E	Chemistry 6E, Civil Eng. 3E	Chemistry 6E, Mining 3E	Chemistry 6E
1-4	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Mech. Eng. 3E, Lab. Elec. Eng. 3E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab. Geology 4, Lab. Mineralogy 4, Lab.	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Mech. Eng. 3E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab. Geology 4, Lab. Mineralogy 4, Lab.	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Mech. Eng. 3E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab. Geology 4, Lab. Mineralogy 4, Lab.	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Mech. Eng. 3E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab. Geology 4, Lab. Mineralogy 4, Lab.	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Elec. Eng. 3E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab. Geology 4, Lab. Mineralogy 4, Lab.	Chemistry 6E, Lab. Civil Eng. 3E, Lab. Civil Eng. 3E, Lab.
FOURTH CLASS						
9-10	Mining 7E-7E	Mech. Eng. 7E, Mech. Eng. 7E, Geology 8E-8E	Mining 7E-7E	Mech. Eng. 7E, Mech. Eng. 7E, Geology 8E-8E	Mining 7E-7E	Mining 7E, Mining 7E
10-11	Mining 8E, Metallurgy 2E, 3E, Civil Eng. 7E	Metallurgy 7E, Mech. Eng. 7E	Mining 8E, Metallurgy 2E, 3E, Civil Eng. 7E	Metallurgy 7E, Mech. Eng. 7E	Mining 8E, Metallurgy 2E, 3E, Civil Eng. 7E	Mining 8E, Mining 8E
11-12	Mech. Eng. 7E, Mining 8E, Geology 8E	Metallurgy 8E, Mining 8E	Mech. Eng. 7E, Geology 8E	Metallurgy 8E, Mining 8E	Mech. Eng. 7E, Geology 8E	Metallurgy 8E, Mining 8E
1-4	Mining 8E, Lab. Mining 8E, Lab. Geology 8E, Lab.	Mining 8E, Lab. Mining 8E, Lab. Geology 8E, Lab.	Mining 8E, Lab. Mining 8E, Lab. Geology 8E, Lab.	Mining 8E, Lab. Mining 8E, Lab. Geology 8E, Lab.	Mining 8E, Lab. Mining 8E, Lab. Geology 8E, Lab.	Metallurgy 7E-7E, Lab.

- 1907-1908 curriculum for mining engineering.



From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1907 – West end of the Mechanical Engineering Testing Lab.
- 150,000 lb Emery testing machine in the rear, delivered in 1889.
- Torsion machine and 60,000 lb machine in the foreground.



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The Fifth Decade: 1905-1914



- 1907 – Morningside campus views, showing
 - The Engineering (now Mathematics) and Mines (now Lewisohn) Buildings.
 - The south court from the east, with the Faculty Club (left), School of Mines (center), and Low Library (right, near view).



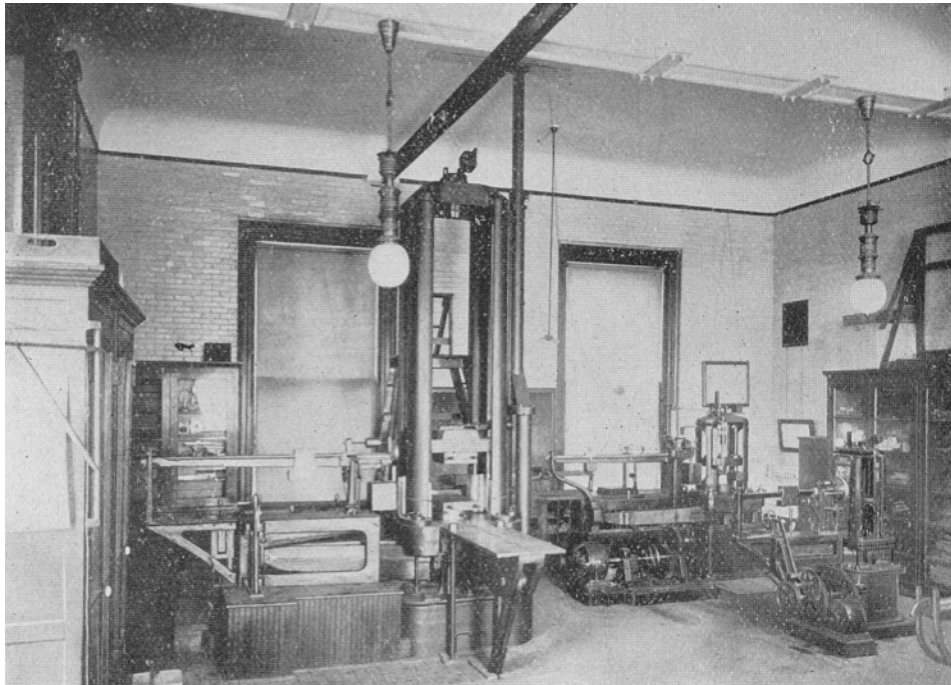
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From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1907 – East end of the Mechanical Engineering Testing Lab.
- 400,000 lb machine on the left.
- 50,000 and 100,000 lb machines on the right.



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The Fifth Decade: 1905-1914

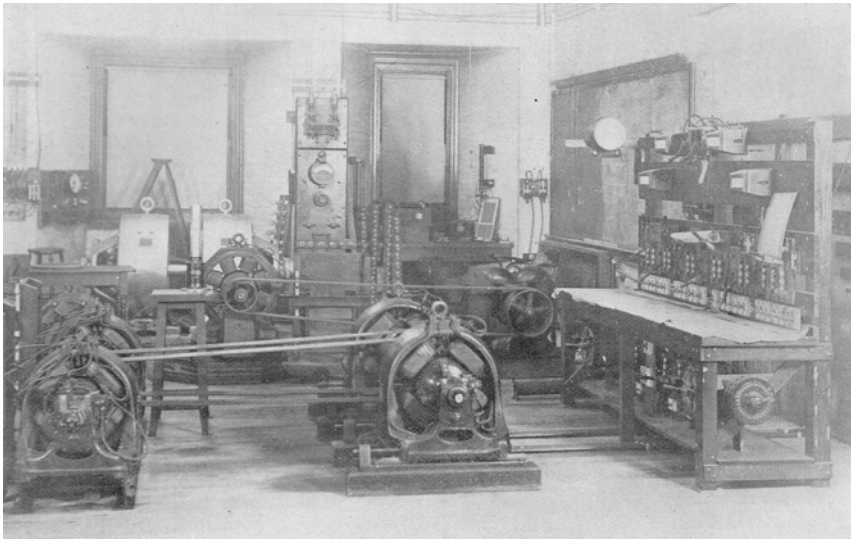
FACULTIES	First Year	Second Year	Third Year	Fourth Year	Non-candidates	Graduates	Total 1908
Columbia College	153	171	144	112	70	..	650
Barnard College	135	95	115	59	49	..	453
Total Undergraduates . . . . .	..	..	..	..	..	..	1,103
Faculty of Political Science . . . . .	..	..	..	..	19	223	242
Faculty of Philosophy . . . . .	..	..	..	..	20	550	570
Faculty of Pure Science . . . . .	..	..	..	..	7	158	165
Total non-professional graduate students* . . . . .	..	..	..	..	46	931	977
Faculty of Applied Science	193	196	128	67	34	..	618
Faculty of Law	87	81	59	..	22	..	249
Faculty of Medicine	59	65	76	80	34	..	314
Faculty of Pharmacy	114	90	..	..	17	3	224
Teachers College . . . . .	..	..	352	317	37	190	896
Faculty of Fine Arts { Architecture . . . . .	..	87	..	..	36	2	125
{ Music . . . . .	..	7	..	..	23	1	31
Total professional students . . . . .	..	..	..	..	..	..	2,457
<i>Deduct double registration† . . . . .</i>	..	..	..	..	..	..	195
Net total . . . . .	..	..	..	..	..	..	4,342
Summer Session, 1907 . . . . .	..	..	..	..	..	..	1,395
Grand total . . . . .	..	..	..	..	..	..	5,737
<i>Deduct double registration † . . . . .</i>	..	..	..	..	..	..	364
Grand net total . . . . .	..	..	..	..	..	..	5,373
Students in extension courses ‡ . . . . .	..	..	..	..	..	..	3,267

- Registration with each faculty at Columbia during the 1907-1908 academic year.



From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1907 – Portion of the Alternating Current Laboratory in Electrical Engineering.



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The Fifth Decade: 1905-1914

	1900-1901	1901-1902	1902-1903	1903-1904	1904-1905	1905-1906	1906-1907	1907-1908
A. Degrees conferred in course								
Bachelor of Arts (men)	84	109	101	102	106	104	113	94
“ “ (women)	50	50	47	80	83	75	76	97
“ “ Laws	99	110	115	110	119	80	75	55
“ “ Science (Columbia College)	9	17	27	39	79	118	103	120
“ “ “ (Education)	10	15	7	10	5	5	7	6
“ “ “ (Architecture)	8	6	10	4	3	4	6	9
“ “ “ (Chemistry)	14	17	19	38	47	45	31	30
Engineer of Mines	16	11	13	22	17	24	20	20
Civil Engineer	19	23	17	23	19	24	16	21
Electrical Engineer	13	21	19	21	11	15	14	12
Mechanical Engineer	1	2	1	1	2	1	1	3
Metallurgical Engineer	147	145	168	178	185	152	93	81
Doctor of Medicine	1	1	1	1	1	1	1	1
Pharmaceutical Chemist	109	155	147	160	197	178	193	219
Doctor of Pharmacy	2	1	1	1	1	2	1	2
Master of Arts	26	33	39	28	38	42	42	55
Master of Laws								
Doctor of Philosophy								
Total	606	713	732	816	914	886	809	863
Deduct duplicates	10	10	15	16	22	19	5	7
Total individuals receiving degrees	596	703	717	800	892	867	804	856
B. Honorary degrees								
Master of Arts	1	1	1	1	1	1	3	1
“ “ Science	2	4	4	2	28	6	1	5
Doctor of Laws	1	1	1	1	1	1	1	2
“ “ Letters	1	1	1	1	1	1	1	1
“ “ Sacred Theology	1	1	2	1	14	2	1	1
“ “ Science								
Total	6	5	9	6	46	9	8	10
C. Certificates and Teachers College diplomas granted								
Certificate in architecture								1
Consular certificate								1
Higher diploma in education	3	4	4	1	1	1	1	1
Bachelor's diploma in education	86	104	105	140	197	197	104	133
Special “ “						22	59	89
Master's “ “		28	19	23	17	36	51	51
Doctor's “ “		3	3	1	7	3	5	5
Total	89	139	127	165	221	258	219	280
Total degrees and diplomas granted	701	857	868	987	1181	1153	1036	1153
Deduct duplicates	40	69	73	112	138	214	152	187
Total individuals receiving degrees and diplomas	661	788	795	875	1043	939	884	966

- 1900-1908, Number of degrees and diplomas granted.



New York Moments

The Fifth Decade: 1905-1914



- Views of the construction of the Manhattan Bridge.
 - 1908 - The foundation (left).
 - 1908 - The first tower (center).
 - 1909 - View from Brooklyn (right).



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New York Moments

The Fifth Decade: 1905-1914



- 1908 – The Lower East Side.



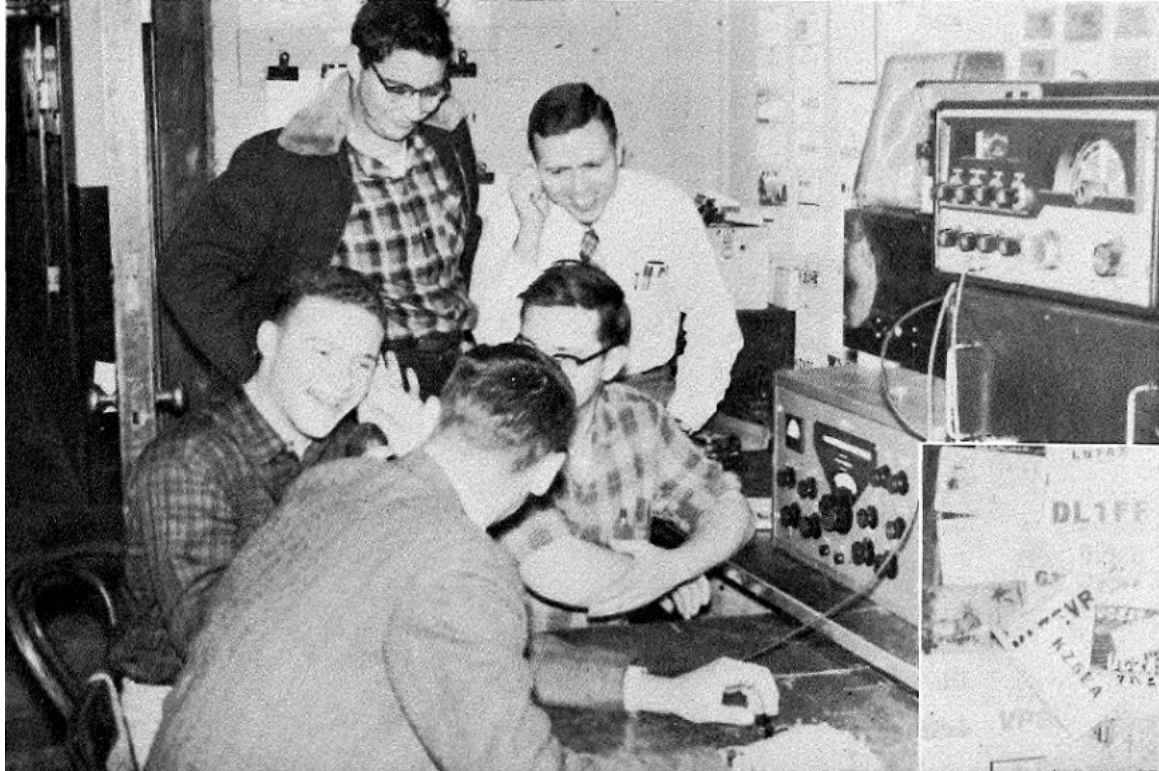
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From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1908 – Students form the Wireless Telegraph Club of Columbia University, later called the Columbia University Amateur Radio Club.
 - This is the earliest recorded formation of an amateur radio club.
 - The photo of the Radio Club is from the 1963 *Columbia Engineer* yearbook.



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New York Moments

The Fifth Decade: 1905-1914



A FLOOD OF LIGHT

A single touch brings a flood of light.
Another touch dismisses it.
Best artificial light ever known.

Displays the home and its treasures at their very best.
No exposed flame to blacken walls and decorations with soot or vitiate the air—causing ill health, to flare in the wind or be blown out.
Pure, steady, clean, cool, sanitary, safe.
Can be placed anywhere—even in clothes closet.

The lamps and fixtures are decorations.
Color, design and situation arranged to suit individual taste.
Is your home Electric Lighted? If not, we can help. Write Sales Department.

Edison Electric Illuminating Company of Brooklyn
360 PEARL STREET Telephone, 4640 Main

- In 1909 electric lighting was slowly making its way into residences.
 - Only three out of every ten homes in New York City had electricity.
- Shown, 1909 advertisement for home electricity highlights the benefits of adopting electric light.

New York Moments

The Fifth Decade: 1905-1914



- 1910 – Penn Station opens.
 - Designed by McKim, Mead & White, the same architectural firm that designed the Morningside Heights campus.
 - In 1963 it was demolished and replaced by an underground Penn Station.
- Shown
 - 1908 – The hole during construction.
 - 1911 – The Seventh Avenue façade.



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New York Moments

The Fifth Decade: 1905-1914



- 1910 – Vaudeville at Union Square.



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New York Moments

The Fifth Decade: 1905-1914



- 1910 – Times Building (right, upper)
- 1911 – Times Square at night (left)
- 1914 – Times Square, with the Times Building (right, lower)

From the SEAS Time Capsules

The Fifth Decade: 1905-1914

Prof. Publish Books on Dynamos

Three very practical little books on the Principles, Calculations and Design of Direct Current Dynamos have recently been written by Professors Crocker and Arendt of the Department of Electrical Engineering.

- Engineering School news, December 7, 1911 *Spectator*.



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New York Moments

The Fifth Decade: 1905-1914



- 1911 – Rush hour on the Queensborough Bridge.



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The Fifth Decade: 1905-1914



- 1911 – For his Ph.D. thesis, David Steinman devises the steel truss arch design later to be used for the Henry Hudson Bridge (which opens in 1936, upper photo), to start a renowned career in building bridges, including the Mackinac Bridge in Michigan (which opens in 1957, lower photos).



New York Moments

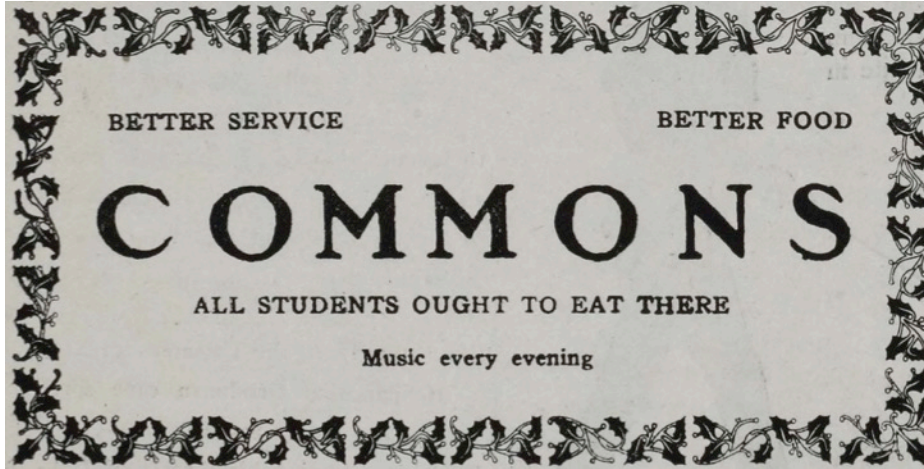
The Fifth Decade: 1905-1914

- May 23, 1911 – Dedication of the New York Public Library main branch at Fifth Avenue at 42nd Street (middle photo from 1914).
- The Croton Reservoir, a popular strolling spot, was torn down in 1899 to make room for the library (lower photo from c. 1897).

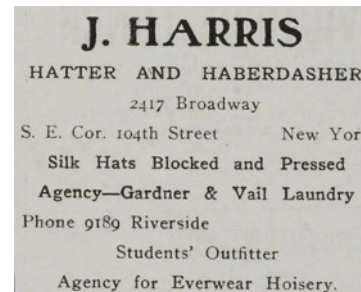


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- Ads in *Spectator*, December 4, 1911, reflecting student life.



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New York Moments

The Fifth Decade: 1905-1914



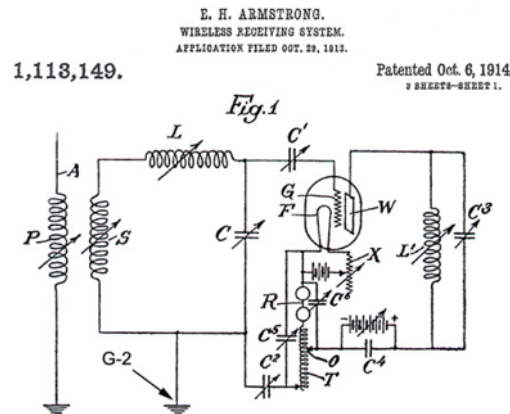
- 1912 – The Polo Grounds: right field (upper) and during the World Series (lower).
- First version built in 1876 for playing polo.
- Bounded by 110th and 112th Streets and Fifth and Sixth Avenues.
- Used at times by the baseball New York Giants, Yankees, and Mets and by the football New York Giants and Jets.
 - Best known as the long-time homes of the two Giants teams.
 - Last sporting event was the football game between the New York Jets and the Buffalo Bills on December 14, 1963.

From the SEAS Time Capsules

The Fifth Decade: 1905-1914



- 1912 – Columbia junior Edwin H. Armstrong invents the regenerative circuit, which greatly strengthens radio signals to make them more audible. (He is shown (upper left) as a student and (lower) during World War I.)
- This invention occurs at his home (1032 Warburton Ave., Yonkers).



- “His sister, Ethel, remembers vividly the night it happened. “Mother and Father were out playing cards with friends and I was fast asleep in bed. All of a sudden Howard burst into my room carrying a small box. He danced round and round the room shouting, ‘I’ve done it! I’ve done it!’”” (<http://www.yonkershistory.org/arms.html>).
- He is shown (upper right) in 1947 revisiting his bedroom in Yonkers where he made this discovery.

- He later becomes a Columbia professor and invents other transformational circuitry and devices, including FM radio (1933).

New York Moments

The Fifth Decade: 1905-1914



- Grand Central Station.
 - It opens midnight February 2, 1913.
 - Excavation had started in 1908.
 - Seen from the outside in 1913.



New York Moments

The Fifth Decade: 1905-1914



- The largest suffrage parade to date, with 10,000 people marching down Fifth Avenue on May 10, 1913.



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From the SEAS Time Capsules

The Fifth Decade: 1905-1914



1914 Freshman Rules CAMP COLUMBIA

- 1.) Freshmen must not wear face decorations of any sort.
- 2.) Freshmen must be in Camp by 4 A. M. and must not play cards Sunday morning.
- 3.) Freshmen must address Sophomores and upper classmen by "Sir."
- 4.) When getting supplies, Freshmen should get their seat assignment in Chandler, or they will be debarred in this course.
- 5.) Freshmen must attend meeting Sunday night, and must never swear in public except while leveling.
- 6.) Freshmen must get tobacco and other necessities at Slavie's, when requested to do so by any upper classman.
- 7.) Freshmen must keep off the road to Judd's and to the pie ladies' after dark, during their first two weeks in camp.
- 8.) Freshmen must keep copies of these rules nailed to the outside of their doors.
- 9.) Freshmen must stand up at every meal till upper classmen are seated.

NOTE. Freshmen who get canary will be invited to join the "Goops," the "Mugwumps," the "Bow-Wows," and the Order of "Thirteen Bones."

RULES COMMITTEE.
1913 S.

- Students attend Camp Columbia in Connecticut for several weeks during summers to learn about surveying and other matters, from 1885 to 1966.
- Shown are the 1914 Camp Columbia "rules" for incoming freshman apparently set by rising sophomores, as printed in the 1953 *Columbia Engineer* yearbook.



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From the SEAS Time Capsules

The Fifth Decade: 1905-1914



MEUNIER STATUE ERECTED FOR MINES CELEBRATION

“The Hammerman” Gift of Class of
1889 Mines Presented During
Festive Week

On the south side of Earl Hall, midway between the west walk leading to the School of Mines and the walk in front of the Y. M. C. A. is situated a reproduction in bronze of “The Hammerman” produced in 1884 by Constantin Meunier. This is the artist’s first important work of sculpture which was exhibited in the Paris Salon in 1884 receiving honorable mention.

This bronze figure is the gift of the class of ’89 Mines to the University and is to be formally presented during the week of festivities which is to mark the 50th anniversary of the School.

“The Hammerman” also known as the “Man with the Pincers” repre-

- 1914 – “Le Marteleur” presented during Festive Week.
 - Gift of the Mines Class of 1889.

sents a forge hand about to raise a pair of pliers.

In detail he has a shaven head protected by a piece of leather, a thick leather apron covers his stomach and legs. His left hand grasps the handle while his right hand holds a pair of pliers. The shape of the hand and rounded shoulders indicate the subordination of mental and physical vivacity to sheer bodily force. The facial expression is solemn while his eyes are dull and sad.

It was in the factory and forge in the mill and furnace that Meunier found his type and his glory lay in that he revealed to poverty its conscience and its moral beauty.



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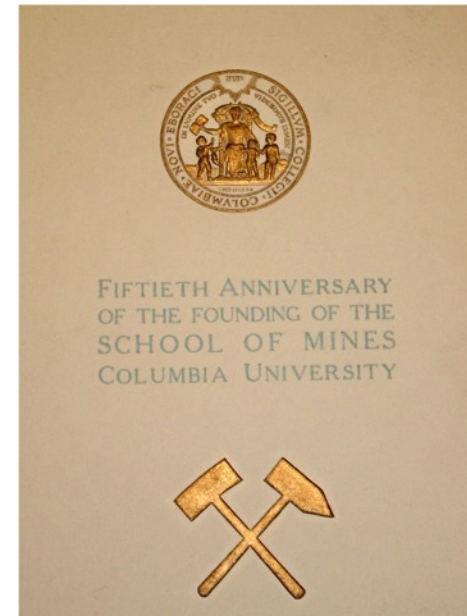
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Columbia Daily Spectator, Volume LVII, Number 181, 3 June 1914

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- 1914 – The 50th Anniversary of the School of Mines.



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- 1914 – The plaque commemorating the 50th Anniversary of the School of Mines.
- The “School of Mines” sign is relocated from the Mines Building to the Mudd Building c. 1961, shortly after the School’s move.
- The Henry Krumb sign is added later.