

American Institute of Electrical Engineers

1884



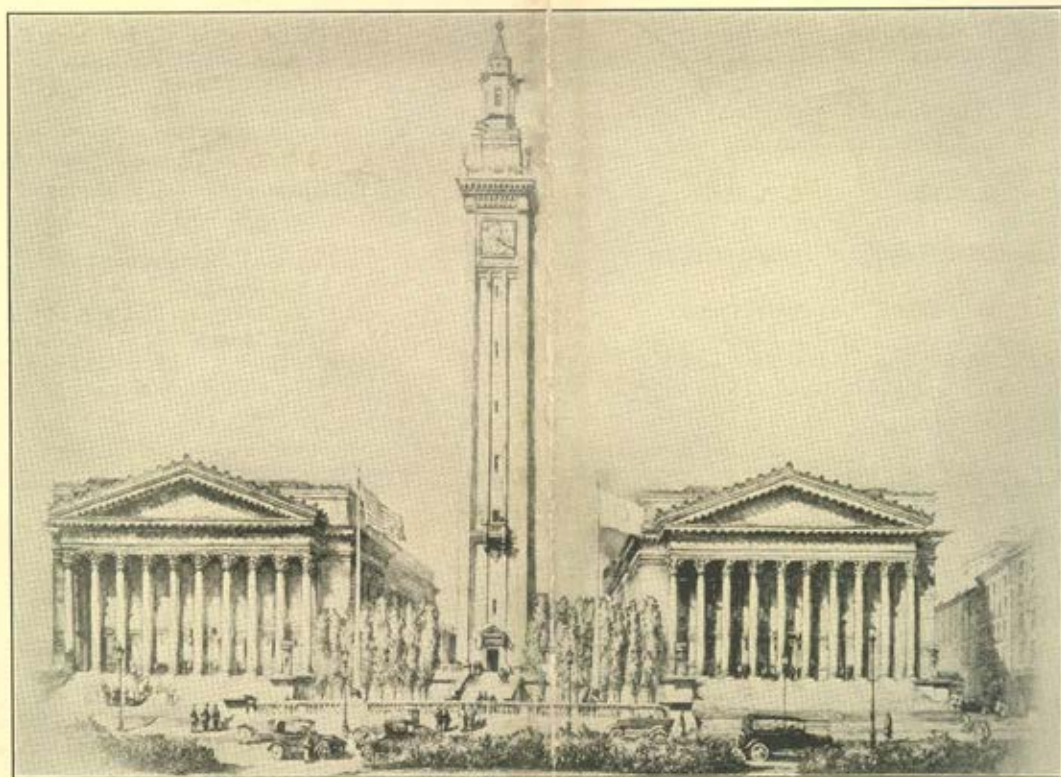
1930

SIXTH

Northeastern District Meeting and STUDENT CONVENTION

Hotel Kimball, Springfield, Mass.

May 7-10, 1930



Springfield Municipal Group

Committees



General Committee

E. B. Merriam, *Chairman*
Vice-President Northeastern District, A.I.E.E.
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Coordinating Committee

W. H. Colburn F. M. Sebast
R. G. Warner

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F. M. Sebast

B. V. K. French
F. L. Hunt

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B. V. K. French A. L. Potter
G. J. Lang A. B. Reynders
P. B. Loomis Fred Rogers
A. T. Murray J. B. Tufts
J. F. Murray C. A. M. Weber

Publicity

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Entertainment and Banquet

C. A. M. Weber, *Chairman*
Ralph Curtis L. P. Kongsted
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Fred Rogers

Hotels and Registration

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Roy Benedict Hans Passburg
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Sports

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C. L. Walker

Inspection Trips and Transportation

John Alberti, *Chairman*
G. W. Atkinson W. F. Cotter
George Barr L. F. Curtis
M. W. Bartmess G. H. Garcelon
J. P. McKearin

Ladies' Entertainment

J. M. Newton, *Chairman*
Mrs. G. W. Atkinson Mrs. J. F. Murray
Mrs. M. W. Bartmess Mrs. J. M. Newton
Mrs. F. L. Hunt Mrs. Fred Rogers
Mrs. C. A. M. Weber



The Springfield Country Club

Northeastern District Meeting and Student Convention

Springfield, Mass., May 7-10, 1930



THE sixth annual meeting of the Northeastern District will be held at Springfield, Massachusetts, May 7-10. Headquarters will be at the Hotel Kimball and the Springfield Section will act as host. Technical papers of unusual interest, inspection trips, a Student Branch Conference and entertainment will make up the program.

Springfield is located on the principal railroad and highway trunk lines of New England and is easily accessible from all directions. Settled in 1636, it has many points of historical interest, including the old U. S. Arsenal founded by George Washington in 1789, where the famous Springfield rifles were manufactured in 1795. Its municipal group, costing nearly \$2,000,000, is acknowledged to be the finest in the country, and its interest to engineers is heightened by the great variety of manufacturing which is carried on in its modern industrial plants, many of which will be open to inspection by Institute members and their guests.

Technical Sessions

Unusual engineering papers, advancing the theory and practise of electrical engineering, comprise five technical sessions, one on instruments and measurements, one on transmission, two on electrical machinery, and another on selected subjects.

Engineering Papers

A few of the engineering subjects to be presented are: a new portable oscillograph, a self-compensating temperature indicator, a network analyzer, lightning investigations, post type towers, calculation of induction motor performance, armature winding, voltage irregularities in d-c. generators, effect of armature resistance upon hunting of synchronous machines, cooperative courses, ship-to-shore telephone service, and the calculation of cable temperature in subway ducts. A complete program appears in a subsequent part of this announcement.

Student Sessions

A session on Student Branch Activities has been scheduled for 11:00 a.m. Friday. A student chairman will preside and will call upon the representative from each Branch in the District to give an outline of activities in his Branch. At 12:15 there will be a luncheon conference of student delegates. A student technical session will be held in the afternoon. Inspection trips will follow this session.

Inspection Trips

Inspection trips have been coordinated with the technical papers and will include electrical features of interest in the vicinity of Springfield.

An inspection trip of major interest will be the Cobble Mountain hydroelectric and City of Springfield water supply development now under construction. A dam 245 ft. high, 1505 ft. thick at the base and 700 ft.

(Continued on page 6)



Sluicing Earth Dam for the Springfield Water Works and Cobble Mountain Hydroelectric Development

COMPLETE PROGRAM

(DAYLIGHT SAVING TIME)

9:00 a.m. **Wednesday, May 7**

Registration

10:00 a.m.

Welcome by Dwight R. Winter, Mayor of Springfield

Address by E. B. Merriam, Vice-President, Northeastern District, A.I.E.E.

10:15 a.m.

Instruments and Measurements

Technical Session

E. S. Lee, *Chairman*

A New Portable Oscillograph

C. M. Hathaway
General Electric Co.

A Self-Compensating Temperature Indicator

I. F. Kinnard and H. T. Faus
General Electric Co.

Determination of Generator Speed and Retardation during Loss Measurements

O. E. Charlton and W. D. Ketchum
Southeastern Engineering Co.

The M.I.T. Network Analyzer

H. L. Hazen and M. F. Gardner
Massachusetts Institute of Technology

O. R. Schurig
General Electric Co.

Phase Defect Angle of an Air Capacitor

W. B. Kouwenhoven and C. L. Lemon
Johns Hopkins University

Determination of Tensile Properties of Conductor Cables

G. W. Stickley
Aluminum Company of America

2:00 p.m.

Transmission

Technical Session

E. W. Dillard, *Chairman*

Transmission Research and Design with the Field As a Laboratory

F. E. Andrews and C. L. Stroup
Public Service Company of Northern Illinois

Calculation of Protection of a Transmission Line by Ground Conductors

H. B. Dwight
Massachusetts Institute of Technology

A New Transmission Line Construction—Post Type Towers

P. H. Thomas
Consulting Engineer

Arcing Grounds and the Effect of Neutral Impedance

J. E. Clem
General Electric Co.

Fused Grading Shields

H. A. Frey and E. M. Skipper
Locke Insulator Corp.

3:00 p.m.

Short Inspection Trips—For details see inspection trips on Thursday and Friday

8:30 p.m.

Informal Reception

9:00 a.m. **Thursday, May 8**

Electrical Machinery

Technical Session

J. A. Johnson, *Chairman*

Effect of Transient Voltage on Power Transformer Design—The Behavior of Transformers with Neutral Isolated or Grounded through an Impedance

K. K. Paluëff
General Electric Co.

Reduction of Eddy Current Losses by the Inverted Turn Transposition and the Twisted Lead Transposition

J. M. Lyons
General Electric Co.

Effect of Armature Resistance upon Hunting of Synchronous Machines

C. F. Wagner
Westinghouse Electric & Mfg. Co.

Calculation of Alternator Swing Curves

F. R. Longley
Western Massachusetts Companies

2:00 p.m.

Electrical Machinery

Technical Session

Professor H. B. Dwight, *Chairman*

The Synchronous-Repulsion Motor—A Special Development for the Photophone

H. C. Specht
Westinghouse Electric & Mfg. Co.

Synchronous-Motor Effects in Induction Machines

E. E. Dreese
Lincoln Electric Co.

Transformer Ratio and Differential Leakage of Distributed Windings

R. E. Hellmund and C. G. Veinott
Westinghouse Electric & Mfg. Co.

Induction Motor Performance Calculations

P. L. Alger
General Electric Co.

COMPLETE PROGRAM — *Continued*

Voltage Irregularities in D.C. Generators

J. T. Fetsch, Jr.
Naval Research Laboratory

3:00 p.m.

Inspection Trips Available:

East Springfield Plant of the Westinghouse Electric & Mfg. Co.

United States Armory, including plant where the Springfield rifles are made and museum showing development of these

Strathmore Paper Company Plant at Woronoco

7:00 p.m.

Convention Dinner with Lecture and Presentation of District Prizes

9:00 a.m.

Friday, May 9

Selected Subjects

Technical Session

F. L. Hunt, *Chairman*

Cooperative Courses—Their Development and Operating Principles

K. L. Wildes
Massachusetts Institute of Technology

Shunt Resistors for Reactors

F. H. Kierstead, H. L. Rorden and
L. V. Bewley
General Electric Co.

Radio Telephone Service to Ships at Sea

William Wilson and Lloyd Espenschied
American Telephone & Telegraph Co.

The Calculation of Cable Temperature in Subway Ducts

W. B. Kirke
Brooklyn Edison Co.

Relations of D-C. and A-C. High and Low Voltage Measurements on Rubber Cable

C. L. Kasson
Edison Electric Illuminating Co. of Boston

11:00 a.m.

Student Sessions

Session on Student Branch Activities

12:15 p.m.

Luncheon Conference of Delegates

Professor F. M. Sebast, *Presiding*

1:45 p.m.

Student Technical Session

Single-Phase Loads from Polyphase Circuits

R. B. Whittredge
Yale University

The Development of Magnetic Circuits in Electrical Machinery

F. H. Eastman and A. K. Wing
Yale University

The Electrical and Magnetic Properties of Chrome Steels

F. K. Fischer
Rensselaer Polytechnic Institute

8:00 p.m.

Theatre Party

9:00 a.m.

Saturday, May 10

All-day trip to Cobble Mountain Hydroelectric Development

All-day trip to 10,000-kw. mercury boiler and turbine installation at Hartford

Ladies' Entertainment Program

9:00 a.m.

Wednesday, May 7

Registration

10:00 a.m.

Welcome by Dwight R. Winter, Mayor of Springfield

Address by E. B. Merriam, Vice-President, Northeastern District, A.I.E.E.

10:30 a.m.

Visit Art Museum and the William Pynchon Memorial Building

2:00 p.m.

Auto Trip to Thompsonville and inspection of Bigelow-Hartford Carpet Plant

Return to Springfield and inspect plant of Harris Silk Hosiery Co.

8:30 p.m.

Informal Reception. Dancing and cards.

Thursday, May 8

All-day auto trip to South Hadley, Amherst and Northampton, visiting Mount Holyoke College, Amherst College, Amherst Agricultural College, and Smith College, with luncheon at Lord Jeffrey Inn, at Amherst.

7:00 p.m.

Convention Dinner with Lecture and Presentation of District Prizes

10:00 a.m.

Friday, May 9

Sightseeing trip through Springfield and surrounding country, with luncheon at Barney Villa

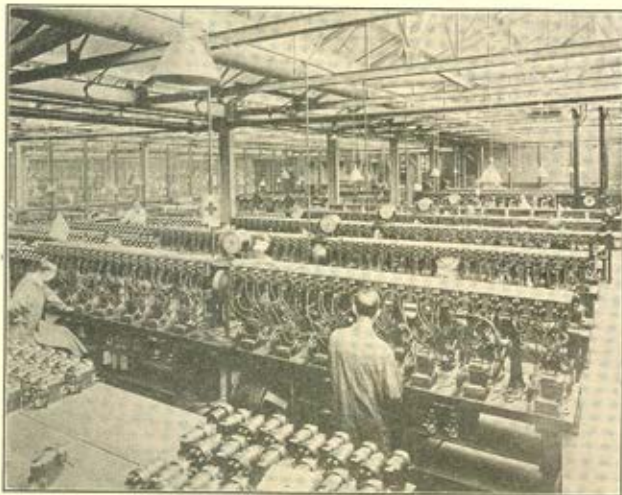
8:00 p.m.

Theatre Party

Saturday, May 10

Auto drive and inspection of Cobble Mountain hydroelectric development

NORTHEASTERN DISTRICT MEETING and STUDENT CONVENTION of the A. I. E. E.



The Magneto Testing Room of the American Bosch Magneto Corporation, Springfield, Mass.

long at the top, containing 200,000 cubic yards of rock fill and 1,600,000 cubic yards of hydraulic fill, will when completed be one of the largest earth dams in the country. Cobble Mountain Reservoir when completed will be capable of supplying 55 million gallons of water per day. Water will be piped through a tunnel, 8000 ft. long and 10 ft. in diameter, to supply a power house with an average head of 420 ft. of water capable of generating 33,000 kilowatts total capacity. The estimated cost of the power house alone is \$1,100,000. The power house, dam, and tunnel together will cost approximately \$3,188,000.

Other interesting inspection trips to be offered are as follows: a 10,000-kw. mercury boiler and turbine installation now in operation at Hartford, the East Springfield Works of the Westinghouse Electric & Manufacturing Company, the plant of the American Bosch Magneto Corporation, automatic substations in Springfield, high-voltage outdoor switching and transforming substations, and also a variety of manufacturing plants to be found in Springfield and vicinity, including the Woronoco mills of the Strathmore Paper Company, the tire factory of the Fisk Rubber Company, the carpet plant of the Bigelow-Hartford Carpet Company, and the hosiery plant of the Harris Silk Hosiery Company.

In order to allow the committee ample time to complete arrangements, registration for these inspection trips should be made at the registration desk as soon as possible.

Entertainment

On Wednesday evening, May 7, there will be an informal reception with music and dancing or cards, as one desires.

On Thursday evening an informal banquet for delegates, members and their ladies will be given.

On Friday evening a theatre party will be arranged.

A Ladies' Committee has been appointed to provide entertainment for the visiting ladies during the technical sessions, a schedule of which is published on another page.

Three excellent golf courses and tennis courts are available for those attending the convention. A golf tournament will be held the first two days of the convention, in connection with which the committee announces prizes for the winners.

Reduced Railroad Rates

Reduced rates for railroad transportation will be available under the certificate plan to members and guests who attend the meeting. Under this plan only half fare need be paid on the return trip over the same route providing 150 certificates are deposited by members at the registration desk. The rates apply to all members who attend the meeting and to dependent members of their families.

Each member or guest should obtain a certificate when purchasing his one-way ticket to Springfield. He should explain to the ticket agent that he wishes the certificate authorized by the passenger associations for the Springfield District Meeting of the Institute.



The East Springfield Works of the Westinghouse Electric & Manufacturing Company

NORTHEASTERN DISTRICT MEETING and STUDENT CONVENTION of the A. I. E. E.

Upon arriving at the meeting the certificate should be deposited at the registration desk. Here it will be held for validation by a railroad representative and if 150 certificates are validated, the validated certificate will later be returned to the owner. By presenting the validated certificate when buying a return ticket only half fare will be charged.

Local ticket agents should be consulted regarding conditions affecting this plan, as it applies only within certain dates depending upon the territory.

Everyone whose one-way fare is over 66 cents should get a certificate whether or not he intends to use it, for by neglecting to do so he may deprive others of considerable saving.

Registration

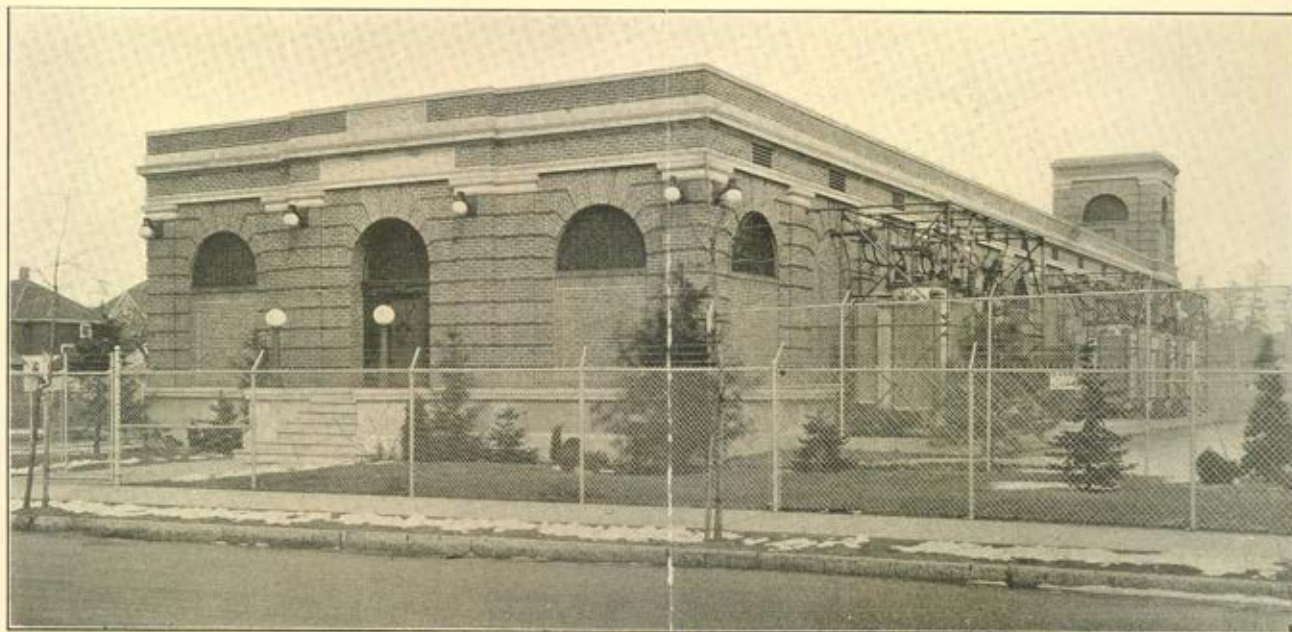
A registration and information bureau will be located in the hotel lobby. Members are requested to register in advance as far as possible by writing to Mr. J. F. Murray, 251 Wilbraham Ave., Springfield, Mass. In order to cover part of the necessary expense incidental to the meeting, a nominal registration fee will be required of the men at the meeting. Registra-

tion cards for the inspection trips, theater and banquet tickets may be obtained at the bureau.

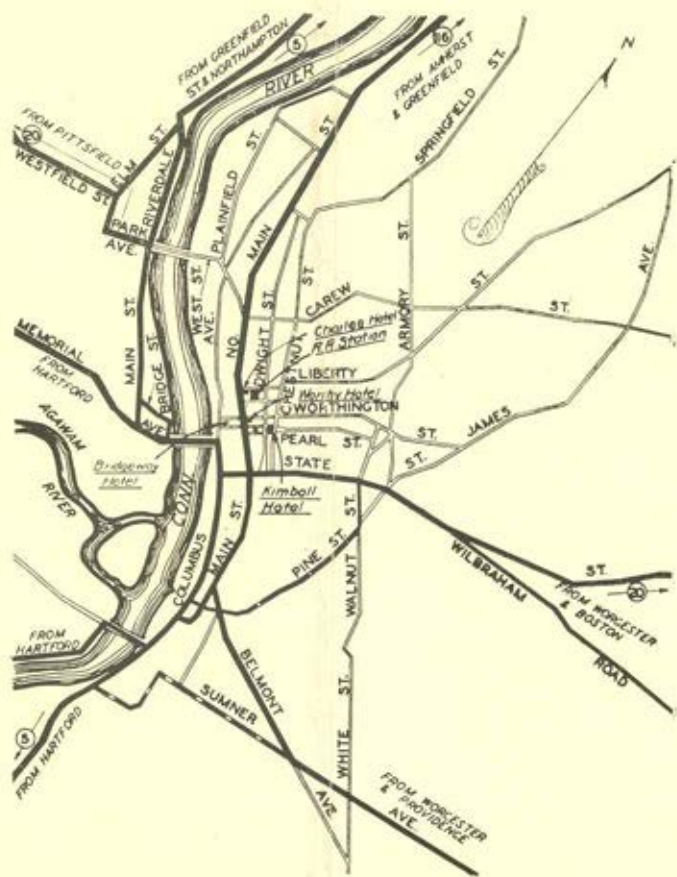
Hotel Accommodations

Convention headquarters will be at the Hotel Kimball. Rates for this and other hotels are given below. Advance reservations should be made direct with the hotel at as early a date as possible.

	Single Rooms		Double Rooms	
	Without Bath	With Bath	Without Bath	With Bath
Hotel Kimball	\$2.50 3.00	\$4.00 5.00	\$5.00 5.50	\$6.00 8.00
Hotel Charles	(same rates as Kimball)			
Hotel Highland	2.00 2.50	2.50 3.50	3.50 4.00	4.00 5.50
Hotel Worthy	2.00 2.50	2.50 3.00	3.00 4.00	5.00 7.00
Hotel Clinton	2.00	2.50 4.00	3.50	4.00 5.00
Hotel Bridgway	2.00	2.50 3.00	3.50	6.00-7.00 4.00 5.00
Hotel Stonehaven		3.00		5.00



Automatic Substation No. 6 of the United Electric Light Company, Springfield, Mass.



Map of Springfield

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