

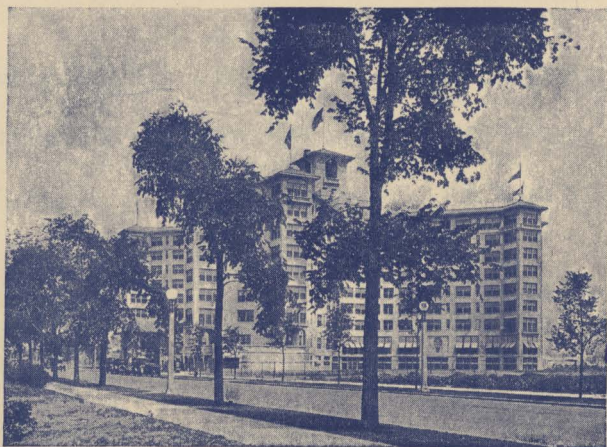
Calumet Station of Commonwealth Edison Co.

*Announcement*  
OF THE  
**Annual Convention**  
OF THE  
AMERICAN INSTITUTE OF  
ELECTRICAL ENGINEERS

EDGEWATER BEACH  
CHICAGO, ILLINOIS

JUNE 23-27, 1924

*Headquarters, Edgewater Beach Hotel*



Convention Headquarters



Announcement of the  
**ANNUAL CONVENTION**

OF THE

**American Institute of Electrical Engineers**

**JUNE 23-27, 1924**

**EXCELLENT PAPERS—TRIPS—ENTERTAINMENT**

A visit to the Annual Convention will be well worth the while of any member of the Institute. The technical sessions will disclose much new information on distribution, cables, automatic stations, reactors, communication, electrical machinery, electrophysics and street lighting.

The vicinity of Chicago holds many things of interest, both of engineering nature and otherwise.

Edgewater Beach is a most pleasant place to spend a few days and the social features will be thoroughly enjoyed. Several afternoons and evenings will be devoted to sports and entertainment.

**PROGRAM**

NOTE: Complete copies of the technical papers listed in this program may be obtained from Institute Headquarters on request. Most of the papers are now available.

**MONDAY, June 23**

- 10:00 A. M. Section Delegates and Committee Meetings.
- 2:30 P. M. Section Delegates and Committee Meetings.
- 8:00 P. M. Informal Dance.

**TUESDAY, June 24**

- 9:00 A. M. Social Hour.
- 10:00 A. M. President's Address—*Forty Years of the American Institute of Electrical Engineers*, by Harris J. Ryan.
- Technical Committee Reports

- 2:00 P. M. Sports and Entertainments.
- 6:00 P. M. Educational Committee's Informal Dinner and Conference.
- 8:00 P. M. President's Reception and Dance.

**WEDNESDAY, June 25**

- 9:00 A. M. Social Hour.
  - 10:00 A. M. Two Parallel Technical Sessions.
- SESSION A, UNDER AUSPICES OF PROTECTIVE DEVICES COMMITTEE, H. R. WOODROW, CHAIRMAN
- (1) *Automatic Stations for A. C. & D. C. Networks*, by C. W. Place, General Electric Company.
  - (2) *The Cleveland Heights Substation of The Cleveland Electric Illuminating Company*, by H. L. Wallau, The Cleveland Electric Illuminating Co.

- (3) *Automatic Substations for Supplying 1500 Volts D-C. to Suburban Railways*, by C. A. Butcher, Westinghouse Elec. & Mfg. Co.
- (4) *Automatic Motor-Generator Equipments on Edison Service of The Indianapolis Light & Heat Co.*, by Herman Bany, General Electric Co.
- (5) *Operating Experience with Automatic Equipment on an Edison System*, by F. D. Wyatt, The Union Gas & Electric Co.
- (6) *Automatically Controlled Hydro-Electric Generating Stations*, by R. J. Wensley, Westinghouse Elec. & Mfg. Co.

SESSION B, UNDER AUSPICES OF TELEGRAPHY AND TELEPHONY COMMITTEE, O. B. BLACKWELL, CHAIRMAN; AND ELECTROPHYSICS COMMITTEE, F. W. PEEK, JR., CHAIRMAN

- (7) *Selective Circuits and Static Interference*, by J. R. Carson, American Telephone & Telegraph Co.
- (8) *The Transmission Unit and Telephone Transmission Reference Systems*, by W. H. Martin, American Telephone and Telegraph Co.
- (9) *Sensitive Radio-Frequency Relay*, by George Lewis, Crosby Manufacturing Co.
- (10) *The Transient Visualizer*, by H. M. Turner, Yale University.
- (11) *Temperature Rise of Stationary Electrical Apparatus as Influenced by Radiation, Convection and Altitude*, by V. M. Montsinger and W. H. Cooney, General Electric Co.
- (12) *Effect of Altitude on Temperature Rise of Electrical Apparatus*, by R. E. Doherty and E. S. Carter, General Electric Co.

- 1:00 P. M. Past-Presidents' Luncheon.
- 2:00 P. M. Sports and Entertainment.
- 7:30 P. M.

MEETING UNDER AUSPICES OF THE STANDARDS COMMITTEE, H. S. OSBORNE, CHAIRMAN

*Address*, by A. W. Whitney, Chairman, American Engineering Standards Committee.

*Standards of the A. I. E. E.—Brief Presentation for Discussion of Certain Sections of the Proposed Revised A. I. E. E. Standards* by the

chairmen of the working committees as listed below.

*Standards for Transformers, Induction Regulators and Reactors*, by John D. Bowles.

*Standards for Synchronous Converters*, by John C. Parker.

*Standards for Industrial Control Apparatus*, by H. D. James.

*Standards for Electric Arc-Welding Apparatus*, by F. M. Farmer.

*Standards for Insulators*, by R. E. Argersinger.

**THURSDAY, June 26**

- 9:00 A. M. Social Hour.
  - 10:00 A. M. Two parallel technical sessions.
- SESSION A, UNDER AUSPICES OF TRANSMISSION AND DISTRIBUTION COMMITTEE, F. G. BAUM, CHAIRMAN
- (13) *Underground A-C. Network Distribution*, by A. H. Kehoe, United Electric Light and Power Co.
  - (14) *General Light and Power Supply of Chicago*, by G. M. Armbrust and J. B. Jackson, Commonwealth Edison Co.
  - (15) *Study of Underground Distribution Systems*, by W. R. Bullard, New Orleans Public Service.
  - (16) *Equivalent Single-Phase Networks for Calculating Three-Phase Short-Circuit Currents*, by R. A. Shetzline, American Telephone and Telegraph Co.
  - (17) *Standardization in Construction and Operation*, by M. L. Sindeband, American Gas and Electric Co.

SESSION B, UNDER AUSPICES OF PROTECTIVE DEVICES COMMITTEE, H. R. WOODROW, CHAIRMAN

- (18) *Current-Limiting Reactor Characteristics*, by S. I. Oesterreicher, Metropolitan Device Corp.
- (19) *Design, Installation and Operation of Current-Limiting Reactors*, by H. O. Stephens and F. H. Kierstead, General Electric Company.
- (20) *Current-Limiting Reactors*, by W. M. Dann, Westinghouse Electric & Mfg. Co.
- (21) *Theory of the Saturated-Core Regulator and Reactor*, by A. Boyajian, General Electric Company.



(22) *Application of the Saturated-Core Regulator and Reactor*, by D. K. Blake, General Electric Company.

- 2:00 P. M. **Sports and Entertainments.**  
2:30 P. M. **Board of Directors' Meeting.**  
7:30 P. M. **"With the Fairies."**

### FRIDAY, June 27

- 9:00 A. M. **Social Hour.**  
10:00 A. M. **Two parallel technical sessions.**

SESSION A, UNDER AUSPICES OF ELECTROPHYSICS COMMITTEE, F. W. PEEK, JR., CHAIRMAN; AND LIGHTING AND ILLUMINATION COMMITTEE, G. H. STICKNEY, CHAIRMAN

- (23) *High-Voltage Cables*, by Wm. A. Del Mar and C. F. Hanson, Habirshaw Electric Cable Co.  
(24) *The Dielectric Field in an Electric Power Cable*, by R. W. Atkinson, Standard Underground Cable Co.  
(25) *Direct Method of Calculating Capacitance of Conductors*, by H. B. Dwight, Canadian Westinghouse Co.

- (26) *Improved Method of Measuring Potential Gradient and Flux Density in Irregular Fields*, by J. F. H. Douglas and E. W. Kane, both of Marquette University.  
(27) *Some Notes on Street Lighting*, by Preston Millar, Electrical Testing Laboratories.

SESSION B, UNDER AUSPICES OF ELECTRICAL MACHINERY COMMITTEE, H. M. HOBART, CHAIRMAN

- (28) *Flashing Characteristics of Series and Compound Motors*, by R. E. Ferris, Westinghouse Elec. & Mfg. Co.  
(29) *The 35,000-kw. Frequency Converter for Hell Gate Station*, by O. E. Shirley, General Electric Co.  
(30) *The Inertaire Transformer*, by W. M. Dann and D. R. Kellogg, Westinghouse Electric & Mfg. Co.  
(31) *A New Type of Single-Phase Motor*, by S. R. Bergman, General Electric Co.  
(32) *Theory and Calculation of the Squirrel-Cage Repulsion Motor*, by H. R. West, General Electric Co.

## SPECIAL FEATURES

### The President's Address

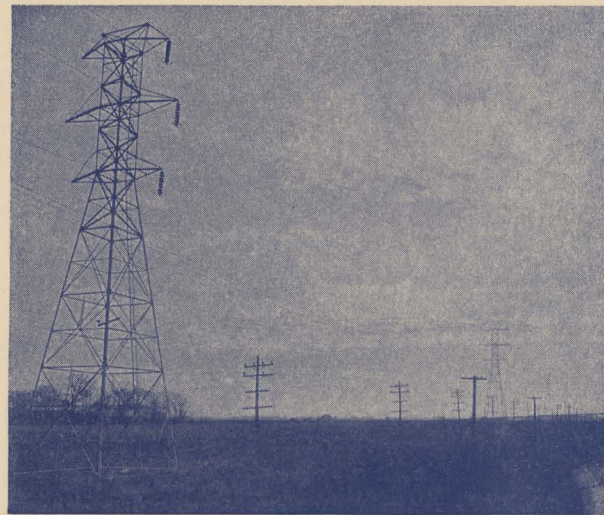
"Forty Years of the American Institute of Electrical Engineers" will be the subject of President Harris J. Ryan's address on Tuesday morning.

### Section Delegates' Meeting

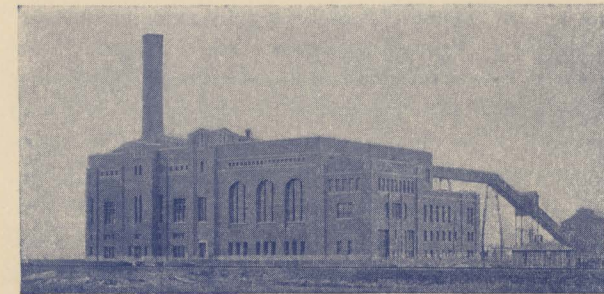
Under the auspices of the Sections Committee the Section delegates will meet during Monday morning and afternoon to discuss their problems and means for increasing the usefulness of the Sections. All Institute members are invited to this meeting.

### Technical Committee Reports

Following the President's address on Tuesday morning the reports of the various Technical Committees will be presented. An effort has been made to pic-



The 132,000-volt line from Waukegan



Waukegan Station, 200,000 Kw. Ultimate Capacity

ture in these reports the major developments which have taken place during the last year and to give an idea of the present status in the various fields of electrical engineering. The reports should give any member an up-to-date knowledge of progress in the different branches of electricity.

### The Standards Meeting

The broad viewpoint of the objects and advantages of standardization will be the topic of the address by A. W. Whitney, Chairman of the American Engineering Standards Committee. This address will be given in the meeting on Wednesday evening and will be followed by tentative reports from several of the working committees of the A. I. E. E. Standards Committee. These reports will illustrate concretely the way in which the work of the Standards Committee is being done in order to accomplish the broad advantages of standardization. The reports will be presented mainly for bringing out discussion on those sections of the proposed revision which have been formulated.

### Educational Committee's Dinner

An informal conference of those interested in education will be held on Tuesday evening. Those attending will meet together at dinner for friendly discussion of educational subjects, no rigid program having been set. Any member who wishes to join this meeting may notify Professor W. C. Bauer, Northwestern University, Evanston, Illinois, or simply state his desire to do so at the registration desk some time before noon of Tuesday during the convention.

## Social Features

On Tuesday evening the President of the Institute will hold a reception and this will be followed by dancing.

An enjoyable entertainment feature called "With the Fairies" will be staged on Thursday evening.

Dancing will be enjoyed every afternoon and evening to the music furnished by two of the hotel's excellent orchestras.

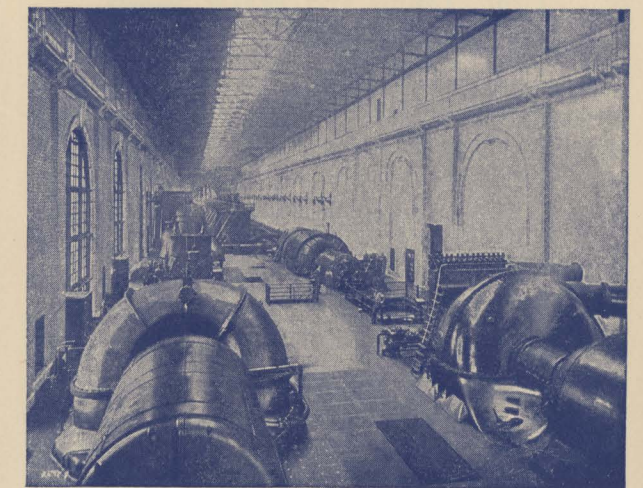
Card parties, teas and sightseeing trips are planned especially for the ladies who will be cordially welcomed.

To add to the sociability of the convention one hour each morning, starting at 9 o'clock, has been set aside as a "Social Hour," during which members may meet in the less formal ways for friendly conversation and discussion.

### Inspection and Sightseeing Trips

A number of inspection trips will be made to points of engineering and general interest. In the following paragraphs are listed some of these places:

*Calumet Station* (Commonwealth Edison Co.)—A boat trip from Lincoln Park will be made to this new station which is now completed.



Turbines of Fisk Street Station, 230,000 Kw. Capacity



**Waukegan Station** (Public Service Company of Northern Illinois)—In this new plant one unit is now in operation. The station has extensive outdoor switching structure and is the terminus of a new 132,000-volt tower line.

**Church Street Substation** (Public Service Company of Northern Illinois)—This is the other terminus of the 132,000-volt line.

**Lakeside Station** (Milwaukee Electric Railway & Light Co.)—This is one of the largest stations using powdered fuel.

**Central Street Automatic Substation** (Chicago Rapid Transit Co.)—This new 2,000-kw. automatic substation is equipped with automatic reclosing feeder equipment and a supervisory control system running to the supervisor's office 14 miles away.

**Remote-Control Distribution Substation** (Commonwealth Edison Co.).

**Machine-Switching Telephone Exchange** (Illinois Bell Telephone Company).

**Hawthorne Plant of Western Electric Co.**

**Gary Steel Works.**

**Pullman Company's Plant.**

**Points of General Interest**—Among the many interesting sights which can be seen are the Field's Columbian Museum, the Art Institute, the Union Stock Yards and the park and boulevard systems.

### Golf, Tennis and Water Sports

The Edgewater Beach Hotel offers many attractions for sports events. Golf courses and tennis courts are close at hand and tournaments will probably be arranged. Bathing in Lake Michigan will be enjoyed and besides there will probably be swimming or diving exhibitions and also boat rides.

### Register as Soon as Possible

Registrations should be made as soon as possible in order that arrangements for the meeting can be completed. Those who are planning to attend the convention should use the accompanying return post card to notify Mr. M. M. Fowler, General Electric Co., Illinois Merchants Bank Building, Chicago, Ill., of their intention.

### Hotel Accommodations

Hotel reservations should be made by communicating directly with the management of the hotel. A list of Chicago hotels is given in this folder. The Edgewater Beach Hotel, 5300 Sheridan Road, Chicago, Ill., will be the convention headquarters. For the convention there will be a special rate at this hotel of \$3.00 per day for single rooms or \$3.00 each for those sharing rooms and suites. All of the rooms are outside and have private baths. The plan of the hotel is European, having two excellent restaurants in connection.

### Garage Space Should Be Reserved

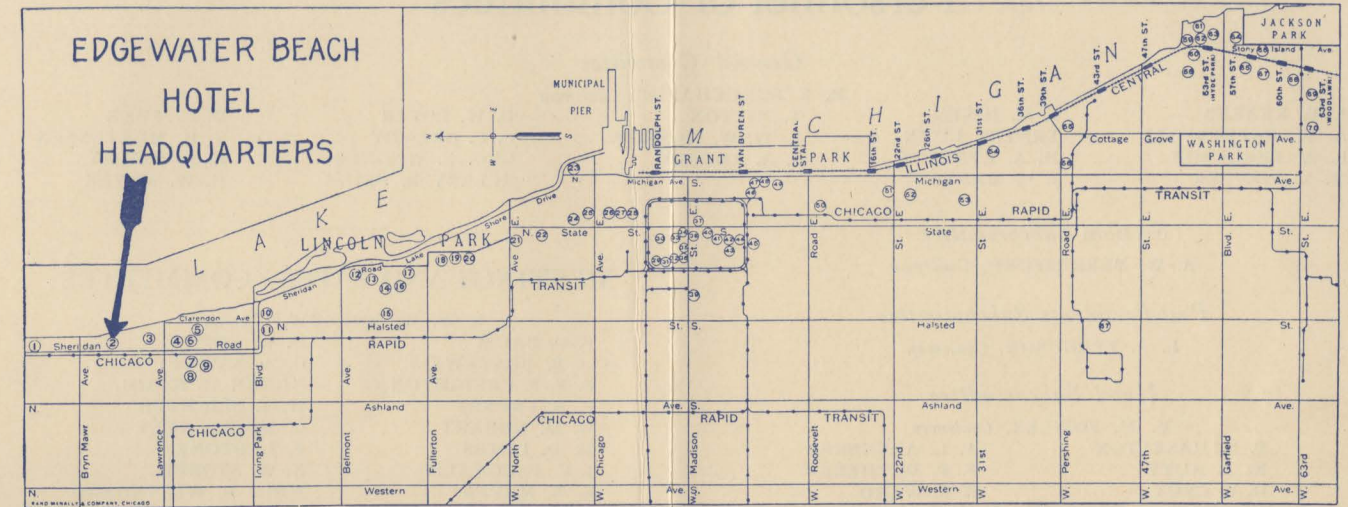
This hotel has garage space available for those who wish to travel to the convention by automobile. Reservations should also be made for garage accommodations.

### Reduced Railroad Fares

Arrangements have been made for reduced railroad fares on the "Certificate Plan" for members and dependent members of their families. By this plan the round trip may be made at one and one-half times the cost of a one-way ticket provided at least 250 certificates are turned in at the convention for validation. These certificates are obtainable with tickets costing not less than 67 cents. *Every member is urged to secure a certificate in order to help others even though he himself does not make use of it.*

The certificate must be requested when purchasing a ticket to the convention. On arrival at the convention it should be handed to the Transportation Committee at the registration desk. This committee will endorse the certificate and pass it to a representative of the railroads for validation. If 250 or more certificates are turned in they will be validated and may later be secured from the Transportation Committee. After validation the certificates entitle the holder to return transportation via the same route at one-half fare. This return rate will obtain up to and including July 1.

### MAP SHOWING LOCATION OF CHICAGO HOTELS



### KEY TO MAP AND HOTEL RATES

No.	Name of Hotel	Location	Rates Per Day		No.	Name of Hotel	Location	Rates Per Day	
			Single Room	Double Room				Single Room	Double Room
26	Alexandria	542 Rush St.	\$3.00	\$4.00	9	Melbourne	4625 N. Racine Ave.		
22	Ambassador	N. State & Goethe St.	6.00	8.00	52	Metropole	23rd & Michigan Ave.	4.00	6.00
42	Atlantic	316 S. Clark St.	2.25-5.00	3.00-6.00	5	Montezuma Lodge	908 Windsor Ave.		
47	Auditorium	Michigan Ave. & Congress St.	3.00-6.00	5.00-8.00	38	Morrison	Clark & Madison Sts.	7.00	12.00
18	Belden	2300 Lincoln Parkway		7.00	39	New Gault	355 W. Madison St.	1.50-3.00	3.00-5.00
12	Belmont	3100 Sheridan Road	6.00	10.00	50	New Southern	13th & Michigan	2.00-4.00	4.00-7.00
31	Bismarck	175 W. Randolph St.	1.75-3.50	3.50-5.00	13	Oakdale	553 Oakdale	Rates on application	
49	Blackstone	S. Michigan & 7th St.	4.00-8.00	16.00	37	Palmer House	Monroe & State Sts.	2.00-6.00	3.00-7.50
43	Board of Trade	231 S. La Salle St.	5.00	6.00	40	Parkway	Lincoln Park West & Garfield Ave.		7.00
28	Bradley	Rush St. & Grand Ave.	2.50	3.25	25	Pearson	190 E. Pearson St.	6.00	7.00
35	Brevoort	120 W. Madison St.	2.50-6.00	4.00-9.00	66	Plaisance	1541 E. 60th St.	Rates on application	
29	Briggs	188 W. Randolph St.	2.00-3.00	3.00-5.00	33	Planters	19 N. Clark St.	2.50-4.00	3.00-6.00
15	Cambridge Apartments	528 Diversey Parkway	Rates on application		21	Plaza	North Ave. & N. Clark	4.50	6.00
59	Chicago Beach	51st & Cornell Ave.	2.50-6.00	3.50-8.00	7	Plymouth	4700 Broadway		
48	Congress	Michigan Ave. & Congress St.	3.00-12.00	5.00-15.00	67	St. George	1435 E. 60th St.	Rates on application	
62	Cooper Carlton	5307 Hyde Park Blvd.	5.00	7.00	10	Sheridan Arms	725 Sheridan Road		
8	Darlington	4700 Racine Ave.	2.00		11	Sheridan Broadway	Sheridan & Broadway		
65	Del Prado	59th & Blackstone Ave.	3.00	5.00	6	Sheridan Plaza	Sheridan Rd. at Wilson	7.00	8.00
24	Drake	140 E. Walton Place	8.00	14.00	4	Sher-Lak	4641 Sheridan Road	1.50-3.00	2.00-4.00
55	Drexel Arms	Drexel & Oakwood Blvds.	4.00	6.00	30	Sherman	N. Clark & Randolph Sts.	6.00	10.00
2	Edgewater Beach	5349 Sheridan Rd.	See Note	Below	17	Shore Crest	420 Wrightwood Ave.	7.00	8.00
63	Elms	53rd St. & Cornell Ave.			61	Sisson	1725 E. 53rd St.	10.00	12.00
16	Embassy	Pine Grove & Diversey			3	Somerset	5009 Sheridan Road	7.00	8.00
45	Fort Dearborn	La Salle & Van Buren Sts.	2.50-5.00	6.00	1	Sovereign	6200 Kenmore Ave.	6.00	7.00
68	Gladstone	6200 Kenwood Ave.	Rates on application		57	Stock Yard Inn	W. 42nd St. & S. Halsted	1.50	2.50
34	Grant	6 N. Dearborn	1.50-3.00	3.00-5.00	70	Strand	63rd & Cottage Grove	1.50	3.00
41	Great Northern	Dearborn & Jackson	2.50-5.00	5.00-10.00	14	Surf	Surf & Pine Grove Ave.	6.00	8.00
69	Hayes	64th & University Ave.	Rates on application		56	Trenier	409 Oakwood Blvd.	2.00	3.00
60	Hyde Park	1511 Hyde Park Blvd.	5.00	7.00	44	Victoria	Clark & Van Buren Sts.	2.00-4.00	3.50
23	Lake Shore Drive	180 Lake Shore Drive	8.00	12.00	27	Virginia	Rush & Ohio Sts.	7.00	12.00
53	Lakota	30th & Michigan Ave.	2.00-5.00	2.50-7.00	54	Warner	33rd & Cottage Grove	1.00-3.00	4.00
36	La Salle	La Salle & Madison Sts.	2.50-7.00	4.00-9.00	32	Washington	167 W. Washington St.	2.00	3.50
51	Lexington	22nd & Michigan Ave.		3.00-8.00	19	Webster	Lincoln Park West at Webster		5.00-7.00
46	Lorraine	417 S. Wabash Ave.	2.50	3.50-5.00	64	Windermere	56th & Cornell Ave.	6.00	8.00
58	Madison Park	1380 Hyde Park Blvd.	Rates on application						
40	Majestic	29 Quincy St.	2.00-4.50	3.50-7.00					

\*Special rates for the convention at Edgewater Beach Hotel are \$3.00 per day per person in single or double rooms. All rooms have bath.



# Personnel of Committees

## General Committee

J. E. KEARNS	C. H. JONES	R. F. SCHUCHARDT, <i>Chairman</i>	D. W. ROPER	D. C. PYKE
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M. M. FOWLER	J. C. MARTIN	S. A. RHODES	ELLERY B. PAINE	H. W. MEYER

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## Past-Presidents Subcommittee

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## Hotel Subcommittee

M. M. FOWLER, *Chairman*

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K. A. AUTY	F. P. WITHERS
H. C. CROY	B. E. WARD
F. E. ANDREWS	

## Local Trips Subcommittee

CHAS. H. JONES, *Chairman*

W. F. SIMS	C. W. PLACE
F. E. GOODNOW	A. P. HYATT

## Transportation Subcommittee

ERNEST LUNN, *Chairman*

## Entertainment Subcommittee

H. A. LYNETTE, *Chairman*

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L. M. GUMM	A. M. JACKSON

## Publicity Subcommittee

J. C. MARTIN, *Chairman*

H. M. LYTLE	A. M. PERRY
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## Registration Subcommittee

T. MILTON, *Chairman*

ROSS I. PARKER	R. H. RICE
J. G. CARROLL	W. E. KILEY
I. L. KENTISH-RANKIN	J. A. FITTS
WILLIAM WURTH	

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D. W. ROPER, Representing Committee in Chicago	
H. HALPERIN	W. O. KURTZ
W. G. KELLEY	A. F. RIGGS
V. E. THELIN	

## Finance Subcommittee

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ALFRED ALSAKER	C. W. PENDELL
N. J. CONRAD	C. J. SCHAUS
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F. B. CROSBY	W. I. SLICHTER
H. M. HOBART	G. H. STICKNEY
H. D. JAMES	F. L. STONE
J. E. McDONALD	N. W. STORER
E. B. MEYER	JOHN B. WHITEHEAD
JOHN MILLS	W. E. WICKENDEN
F. W. PEEK	H. R. WOODROW
G. A. PIERCE	J. L. YARDLEY

And all Section Chairmen

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1923-1924

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HARRIS J. RYAN

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"The advancement of the theory and practice of electrical engineering and of the allied arts and sciences, the maintenance of a high professional standing among its members, and the development of the individual engineer"—These are the objects of the American Institute of Electrical Engineers.

1884



1924

AMERICAN INSTITUTE OF  
ELECTRICAL ENGINEERS

Headquarters

33 West 39th Street, New York, N. Y.