

American Institute of Electrical Engineers

# Fiftieth Annual Summer Convention

The Homestead Hotel, Hot Springs, Va., June 25-29, 1934



On the Golf Course of the Homestead Hotel at Hot Springs

1884  1934

General  
Convention Program

# The Institute's 50th Annual Summer Convention

**T**HE ANNUAL summer convention this year marks the fiftieth meeting of its kind in the history of the Institute. On this occasion and in commemoration of the fiftieth anniversary of the Institute's organization, the committee has arranged for special addresses by Dr. W. E. Wickenden and Dr. William McClellan on educational and professional aspects of interest to electrical engineers, which will be given after the opening meeting. The committee also is using every endeavor to have present all officers of the Institute, all living past-presidents, and all living charter members, as well as a goodly representation of engineers from all sections. The convention will be held at Hot Springs, Va., June 25-29, 1934, with headquarters in The Homestead.

In addition to the fiftieth anniversary celebration, the 1934 summer convention committee has arranged an excellent schedule of events. The annual business meeting and the technical sessions will be held during the mornings, while the afternoons, with the exception of Monday and Tuesday afternoons on which the conference of officers, delegates, and members will take place, have been kept free for sports and other recreation. In the evenings, the president's reception, a get-together banquet with entertainment, and the convention banquet will be held and followed by dancing. These features and the program are given in the following columns as well as other pertinent information relative to hotel arrangements and reduced railroad rates.

## TECHNICAL SESSIONS

The technical program includes 7 sessions: education, electrical machinery, communication, insulators, automatic stations, power generation, and instruments and measurements. The session on education and the activities of the Engineers' Council for Professional Development will be of broad

general interest. The sessions on electrical machinery and communication will be more or less highly specialized and treat some of the latest developments in these phases of the art. The session on insulators is well rounded from the user's point of view as well as the manufacturer's. The subcommittee on lightning and insulators will present data on the flashover values of suspension insulators, and another paper will deal with the selection, life performance, and deterioration of insulators. Several papers by insulator manufacturers will present some of the latest developments in research and design of this product, as well as its radio influence characteristics. The automatic stations session will treat some of the latest developments in methods of load totalizing, voltage regulation, supervisory control, and automatic synchronizing. All who are interested in central stations and hydroelectric generation should find the power generation session of unusual interest. In addition, the final session on instruments and measurements will bring out some new and valuable data on sphere gap calibrations.

## ENTERTAINMENT FEATURES

The president's reception, a get-together banquet with entertainment, and the convention banquet will be held on Monday, Tuesday, and Wednesday evenings, respectively. All these delightful social features will be followed by dancing. In addition, for the ladies there will be a drive to the Hotel Greenbrier, White Sulphur Springs, W. Va., where tea will be served. Facilities for bridge also will be arranged as desired. If there is sufficient registration a tournament will be arranged with prizes for the winners and runners-up.

For all persons registered at The Homestead or its Cottages an entertainment fee of \$5 will be collected at time of registration. For all persons registered at Cas-



acades Inn or elsewhere an entertainment fee of \$10 will be charged. These fees will be devoted to the expenses involved in carrying out the plans of the general convention committee.

#### SPORTS

Excellent facilities are available for golf, tennis, skeet, and horseback riding at Hot Springs and its environs.

**Golf:** Three excellent golf links are available and the usual competition for the Mershon and Lee golf trophies will be held. The Mershon trophy is competed for on a match play handicap basis. The qualifying round for the Mershon trophy must be played on Monday, June 25. The second round, best 16, match play, will be played on Tuesday afternoon, followed by the third round on Wednesday afternoon, with the semi-final and final rounds played on Thursday morning and afternoon.

The Lee trophy is awarded annually for the lowest net score for 36 holes, of which the first 18 may be the qualifying round and the other 18 must be played not later than Thursday afternoon. In addition, a putting contest, 18 holes, for the ladies will be held on Tuesday morning. Prizes for the winners and runners-up will be awarded in the above contests.

**Tennis:** Courts equipped for championship play are available at The Homestead. The first contests in men's singles for the Mershon Tennis Trophy competition will start on Monday, June 25. The second round will be played on Tuesday afternoon and the semi-final and final rounds will be played on Wednesday and Thursday afternoons, respectively. Contests in men's doubles, ladies' singles, and mixed doubles also will be arranged if there should be a sufficient registration for them. Prizes for the winners and runners-up will be awarded in the above contests.



The Homestead, Hot Springs, Va., scene of the Institute's 50th annual summer convention, to be held June 25-29, 1934

**Skeet:** The Homestead operates a well-equipped skeet range, and this popular form of trap shooting may appeal to some members. If a sufficient number should register, a tournament will be arranged. A limited number of guns are available for rental; probably participants will desire to bring their own favorite guns for this sport. Fees are \$1.25 for 25 birds; these include pigeons, shells, pull boys, and trap boys; also transportation to the shooting grounds from the hotel.

**Horseback Riding:** Hot Springs is surrounded by many lovely trails, and The Homestead maintains a fine stable of riding horses.

The prizes for the various sports will be presented at luncheon on Friday, June 29.

#### REDUCED RAILROAD RATES

Fare and one-third for the round trip over the same route will be available to members and guests, provided 100 certificates (or 100 combinations of certificates and round-trip rail tickets with limiting dates from points from which the one-way fare is \$2 or more) are validated at the registration desk. Consult your local ticket agent regarding the dates and territories to which this arrangement applies. Obtain your certificate authorized by the railroad passenger associations.

#### HOTEL RATES AND ACCOMMODATIONS

All rates, shown in Table I, are on the American plan and they, also, will be in effect a few days before and after the convention for any who may wish to make a longer stay at Hot Springs.

Table I—Hotel Rates, American Plan

	Rate per day per person
<b>The Homestead</b>	
Single room—private bath.....	\$9.00
Double room—private bath—twin beds	8.00
Combinations—double room and single room, with bath between, or 2 double rooms with bath between.....	7.50
Cottages (meals at The Homestead)...	7.00
<b>The Cascades Inn</b>	
(2 1/2 miles from The Homestead, free transportation to and from The Homestead, meals at The Cascades Inn).....	5.00



The Cascades Inn and golf course at Hot Springs, Va., 2 1/2 miles from The Homestead

Members should make their reservations by writing directly to the hotel of their preference. For those stopping at places other than The Homestead and its Cottages, an extra charge will be made for the get-together dinner and the banquet. This extra charge is the occasion for 2 different entertainment fees listed under entertainment.

All baggage should be tagged with the owner's name before arrival, to facilitate prompt service. For this purpose, The Homestead will supply tags with the acknowledgment of each reservation. In case these tags are lost or mislaid, an additional supply may be secured on the train between Covington, Va., and Hot Springs, so that all baggage, including golf bags, guns, etc., may be properly tagged. Your careful attention to this detail will avoid delay and greatly facilitate the handling of baggage. Free transportation from trains to the hotels will be supplied with no charge for hand baggage. Heavier baggage checked and



requiring the service of the baggage van will be transported from the train at 50 cents a trip, or \$1 for arrival and departure.

#### REGISTRATION

Immediately on arriving at the convention each member and guest should first register and deposit his railroad certificate. When 100 railroad certificates have been validated, announcement will be made and they should be called for at the desk. There will be a registration fee of \$2.50 for non-members with the exception of Enrolled Students of the Institute, and the immediate families of members. This fee is in addition to the entertainment fee charged to all in attendance.

#### SCHEDULE OF EVENTS

A summarized schedule of events follows: Time given is Eastern Standard Time. Capital letters A, B, etc., denote technical sessions.

### Notice of Annual Meeting

The annual meeting of the American Institute of Electrical Engineers will be held in The Homestead, Hot Springs, Va., at 10 a.m. on Monday, June 25, 1934. This will constitute one session of the annual summer convention which is to be held this year in Hot Springs, June 25-29.

At this meeting the annual report of the board of directors and the report of the committee of tellers concerning the ballots cast for the recent election of officers will be presented.

Such other business, if any, as properly may come before the annual business meeting may be considered.

(Signed) H. H. HENLINE  
*National Secretary*

#### Monday, June 25

- 9:00 a.m.—Registration  
10:00 a.m.—Annual Business Meeting  
Annual report of board of directors (in abstract), H. H. Henline, *national secretary*  
Report of tellers' committee on election of officers; introduction of and response from president-elect  
Presentation of prizes for papers  
Presentation of the Lamme Medal to Dr. Lewis B. Stillwell  
President's address by Dr. J. B. Whitehead  
Fiftieth Anniversary Meeting  
Addresses: Dr. W. E. Wickenden, president, Case School of Applied Science  
Dr. William McClellan, past-president, A.I.E.E.  
2:00 p.m.—Conference of Officers, Delegates, and Members  
Golf—Qualifying round for Mershon trophy  
Tennis—Men's singles for Mershon trophy  
7:00 p.m.—President's reception, followed by dinner and dancing

#### Tuesday, June 26

- 9:00 a.m.—Registration  
9:30 a.m.—(A) Education  
Morning—Putting contest for ladies  
2:00 p.m.—Conference of Officers, Delegates, and Members (continued)  
Golf—Second round, match play—Mershon trophy  
Tennis—Second round—Mershon trophy  
7:00 p.m.—Get-together banquet—entertainment, dancing

#### Wednesday, June 27

- 9:30 a.m.—(B) Electrical machinery  
(C) Communication  
12:30 p.m.—Directors' luncheon and meeting  
2:00 p.m.—Golf—Third round—Mershon trophy  
Tennis—Semi-finals—Mershon trophy  
7:00 p.m.—Convention banquet—dancing

#### Thursday, June 28

- 9:30 a.m.—(D) Insulators  
(E) Automatic stations  
Morning—Golf—Semi-finals—Mershon trophy  
2:00 p.m.—Golf and tennis finals  
Afternoon—Drive for ladies to White Sulphur Springs, with tea at Hotel Greenbrier

#### Friday, June 29

- 9:30 a.m.—(F) Power generation  
(G) Instruments and measurements  
12:30 p.m.—Award of sports prizes at luncheon



A green on the golf course of The Homestead, Hot Springs, Va. This course, at an elevation of 2,300 ft, may be played by members attending the Institute's 50th annual summer convention at Hot Springs, June 25-29, 1934

## Technical Program

The papers for these sessions appeared in the June 1934 issue of **ELECTRICAL ENGINEERING** except 3 which have been published in previous issues: "Iron Shielding for Telephone Cables" by H. R. Moore, Feb., p. 274-80; "Recent Developments in Power Line Carrier" by T. Johnson, Jr., April, p. 542-7, and "Industry Demands and Engineering Education" by L. W. W. Morrow, April, p. 518-22.

### Tuesday, June 26

9:30 a.m.—(A) Education, L. A. Doggett, *chairman*

ENCOURAGING INITIATIVE IN THE ENGINEERING STUDENT, C. L. Dawes, Harvard University.

INDUSTRY DEMANDS AND ENGINEERING EDUCATION, L. W. W. Morrow, McGraw-Hill Publishing Co.

ENGINEERS OF THE NEXT GENERATION, C. F. Hirschfeld, The Detroit Edison Co.

### Wednesday, June 27

9:30 a.m.—(B) Electrical Machinery, S. L. Henderson, *chairman*

VOLTAGE CONTROL OF VAPOR RECTIFIERS, D. Journeaux, Allis-Chalmers Mfg. Co.

GRID CONTROLLED RECTIFIERS AND INVERTERS, C. C. Herskind, General Electric Co.

INSULATION RESISTANCE OF ARMATURE WINDINGS, R. W. Wiseman, General Electric Co.

SPLIT WINDING TRANSFORMERS, D. D. Chase and A. N. Garin, General Electric Co.

FACTORS INFLUENCING THE INSULATION COORDINATION OF TRANSFORMERS—II, P. L. Bellaschi and F. J. Vogel, Westinghouse Electric & Mfg. Co.

9:30 a.m.—(C) Communication, F. M. Craft, *chairman*

IRON SHIELDING FOR TELEPHONE CABLES, H. R. Moore, American Telephone & Telegraph Co.

IRON ARMORED AERIAL COMMUNICATION CABLE, C. L. Gilkeson, Edison Electric Institute, and A. J. Hanks, Western Union Telegraph Co.

RECENT DEVELOPMENTS IN POWER LINE CARRIER, T. Johnson, Jr., General Electric Co.

THE "COMPANDOR"—AN AID AGAINST RADIO STATIC, R. C. Mathes, Bell Telephone Laboratories, and S. B. Wright, American Telephone & Telegraph Co.

### Thursday, June 28

9:30 a.m.—(D) Insulators, D. M. Simmons, *chairman*

FLASHOVER VOLTAGES OF INSULATORS AND GAPS, Subcommittee on Lightning and Insulators.

SELECTION AND PERFORMANCE OF SUSPENSION INSULATORS, Philip Spoth, E. L. Peterson, and V. A. Mulford, American Gas and Electric Co.

HIGH VOLTAGE INSULATORS, W. A. Smith and J. T. Lusignan, Jr., Ohio Brass Co.

THE SUSPENSION INSULATOR, K. A. Hawley, Locke Insulator Corp.

RADIO INFLUENCE INSULATOR CHARACTERISTICS, G. I. Gilcrest, Westinghouse Electric & Mfg. Co.

RECENT DEVELOPMENT IN SUSPENSION INSULATORS, G. M. Barrow, Westinghouse Electric & Mfg. Co.

A NEW PORCELAIN POST INSULATOR, G. W. Lapp, Lapp Insulator, Inc.



9:30 a.m.—(E) Automatic Stations, D. W. Taylor, *chairman*

LOAD TOTALIZING IN THE NEW YORK AREA, F. Zogbaum, The New York Edison Co.

ELECTRONIC REGULATOR FOR A-C GENERATORS, F. H. Gulliksen, Westinghouse Electric & Mfg. Co.

SOME NEW DEVELOPMENTS IN SUPERVISORY CONTROL, M. E. Reagan, Westinghouse Electric & Mfg. Co.

A COMPENSATED AUTOMATIC SYNCHRONIZER, H. T. Seeley, General Electric Co.

## Friday, June 29

9:30 a.m.—(F) Power Generation, H. W. Leitch, *chairman*

A SURVEY OF HYDROELECTRIC DEVELOPMENTS, Subcommittee on Hydroelectric Survey.

VOLTAGE REGULATION AND LOAD CONTROL, H. C. Forbes and H. R. Searing, The New York Edison Co.

A 7,000-AMPERE STATION BUS, H. L. Unland and V. R. Bacon, United Engineers & Constructors, Inc., and W. B. Morton, Philadelphia Electric Co.

9:30 a.m.—(G) Instruments and Measurements, W. B. Kouwenhoven, *chairman*

CROSS CURRENT OF A 5-ARM NETWORK, A. C. Seletzky and J. R. Anderson, Case School of Applied Science.

SELVYN INSTRUMENTS FOR POSITION SYSTEMS, T. M. Linville and J. S. Woodward, General Electric Co.

A TELEMETER WITH PILOT COIL TRANSMITTER, L. J. Lubas and H. L. Bernarde, Westinghouse Electric & Mfg. Co.

CALIBRATION OF THE SPHERE GAP, J. R. Meador, General Electric Co.

## RULES ON PRESENTING AND DISCUSSING PAPERS

At some of the technical sessions, papers will be presented only by title. This will permit the devotion of more time to discussion. At other sessions, papers will be presented in abstract, 10 min being allowed for each paper unless otherwise arranged, or the presiding officer meets with the authors preceding the session to arrange the order of presentation and allotment of time for papers and discussion. Authors will be notified officially in each case about one month in advance.

Any member is free to discuss any paper when the meeting is thrown open for general discussion. Usually 5 min are allowed to each discussor for the discussion of a single paper or of several papers on the same

general subject. When a member signifies his desire to discuss several papers not dealing with the same general subject, he may be permitted to have a somewhat longer time.

It is preferable that a member who wishes to discuss a paper give his name in advance to the presiding officer of the session at which the paper is to be presented. Each discussor is to step to the front of the room and announce, so that all may hear, his name and professional affiliations. Three typewritten copies of discussion prepared in advance should be left with the presiding officer.

Other discussion to be considered for publication should be typewritten and submitted in triplicate to C. S. Rich, secretary of the technical program committee, A.I.E.E. headquarters, 33 West 39th St., New York, N. Y., on or before July 13, 1934.

## COMMITTEES

The general convention committee for the 1934 summer convention consists of the following members: W. S. Rodman, *chairman*; C. A. Robinson, *vice-chairman*; R. C. Bailey, *secretary*; and E. P. Coles, R. N. Conwell, F. M. Craft, S. A. Flemister, J. T. Graff, E. L. Lockwood, W. R. McCann, and I. M. Stein. The chairmen of the various subcommittees working with the general convention committee are as follows:

### Hotels and Registration

E. L. Lockwood, <i>Chm.</i>	E. S. Fitz
H. C. Bailey	J. M. Wilson
R. M. Bush	

### Entertainment

C. A. Robinson, <i>Chm.</i>	A. M. Rosenblatt
H. A. Holmes	J. C. Smith
J. W. Latham	C. H. Weber

### Sports

J. T. Graff, <i>Chm.</i>	J. W. Latham
Cecil Gray	G. L. Weller
J. L. Harrington	

### Technical Sessions

R. N. Conwell, <i>Chm.</i>	H. W. Leitch
C. S. Rich, <i>Secretary</i>	E. J. Rutan
F. M. Craft	D. M. Simmons
L. A. Doggett	D. W. Taylor
S. L. Henderson	

#### Finance

E. P. Coles, *Chm.*  
W. E. Mitchell, *Vice-Chm.*  
J. S. Miller, Jr., *Treas.*  
C. I. Burkholder  
N. H. Coit  
F. M. Craft  
Mark Eldredge  
E. S. Fitz  
Thomas Fuller

E. H. Ginn  
J. W. Hancock  
W. S. Lee, Jr.  
Berrien Moore  
J. H. Paget  
J. E. S. Thorpe

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At the right is a view of the famous Natural Bridge a few miles southeast of Hot Springs. Hewn out of solid limestone by the waters of past ages this great natural arch stands more than 200 ft high and has a 90-ft span. Lee Highway (U. S. No. 11) passes over the top



Below is a view of the "natural chimneys" near Mt. Solon, a few miles northeast of Hot Springs. Here are 7 massive limestone columns, 2 of which stand more than 100 ft high

