

**American Institute of
Electrical Engineers**



**WINTER
CONVENTION**

**January 26-30
1942**

**ENGINEERING SOCIETIES BUILDING
33 West 39th Street • New York, N. Y.**

American Institute of
Electrical Engineers



Winter
Convention
Program

January 26-30
1942

GENERAL INFORMATION

A PROGRAM of 26 technical sessions and conferences, 1 general session, important committee meetings, a smoker, dinner-dance, and the Edison Medal presentation has been arranged. However in view of the war it has not been possible to arrange any inspection trips. For a complete schedule of events and index to details see page 3.

Please register promptly on arrival at the convention. A registration fee of \$2 will be charged all non-members, except Enrolled Students and the immediate families of members.

Get tickets at once for the smoker, the dinner-dance and dance-buffet supper, as the number which can be accommodated is limited.

Information on all features of the convention may be obtained at the registration desk. The Institute rooms and offices on the tenth floor of the Engineering Societies Building are open to members.

Efforts will be made to deliver telegrams and messages promptly. Any mail for members received during the convention will be held at registration desk until called for; letters undelivered at the close of the meeting will be forwarded to latest mailing address. Room 401 is reserved for the Press.

Technical Sessions and Discussions are governed by the "Conduct of Technical Sessions" at the discretion of the chairman presiding. The Institute will appreciate your courtesy and cooperation in strictly abiding by the decisions of the chairman in all matters.

In general papers will be presented in abstract, 10 minutes being allowed for each presentation, unless otherwise arranged by the presiding officer.

Preference will be given to those who have explained in advance their intention to discuss papers. Usually 5 minutes are allowed to each discussor. Names and affiliations should be clearly announced from the platform. If discussions are intended for publication in the TRANSACTIONS they should be typewritten, double spaced (original and two carbon copies), and left with the chairman. Otherwise they should be sent to C. S. Rich, A.I.E.E., 33 West 39th Street, New York, N. Y., before February 14. Written discussions should be brief, without perfunctory commendations, and confined to individual papers rather than groups of papers.

Columbia Engineers Dinner for Columbia Electrical Engineers will be held Wednesday, January 28, at the Columbia University Club, 4 West 43rd Street. A social half hour will precede the dinner, which is scheduled for 6:30 p.m. Informal.

Winter Convention

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Monday, January 26

9:00 a.m.—Registration

9:30 a.m.—Power Generation

(Auditorium)

W. L. CISLER, Presiding

- 41-158. A Turbine-Governor Performance Analyzer. W. O. Osbon, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- 42-72. Control of Tie-Line Power Swings. C. Concordia and H. S. Shott, General Electric Company, and C. N. Weygandt, University of Pennsylvania. 20 cents (by mail 25 cents).
- 42-73. Supplementary Control of Prime Mover Speed Governors. S. B. Crary and J. B. McClure, General Electric Company. 10 cents (by mail 15 cents).

9:30 a.m.—Light Traction

(Room 502)

E. B. FITZGERALD, Presiding

- 42-49. A Control System for Modern Multiple Unit Rapid Transit. H. G. Moore, General Electric Company. 10 cents (by mail 15 cents).
- 42-50. Modern Electrical Equipment for Industrial Diesel-Electric Locomotives. Lanier Greer, General Electric Company. 10 cents (by mail 15 cents).
- 42-52. P C C Car Operating Results in Pittsburgh. W. J. Clardy, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).

9:30 a.m.—Conference on Use of Substitute Materials in the Communication Industry

(Room 501)

E. J. O'CONNELL, Presiding

The conference will begin with a talk by Robert E. McConnell outlining the general situation which necessitates the use of substitute materials and indicating the national problem from the material standpoint and the place of the engineer in its solution. Mr. McConnell is Chairman of the Engineers' Defense Board and is engineering consultant with OPM. This will be followed by brief talks by representatives of the communication industry telling what has already been done, what is under way and what remains to be done in connection with the use of substitute materials. Statements are expected from Messrs. W. M. Angus, R. S. Burnap, R. N. Harmon, L. C. F. Horle, P. J. Howe, R. L. Jones, E. A. Leach and F. C. Young. There will be ample opportunity for informal general discussion and questions and answers following these talks. In conclusion the important points will be summarized by E. E. Thum, Editor of Metal Progress.

Advance Copies of Technical Papers may be purchased at the registration desk or at Institute headquarters at prices indicated. Only numbered papers are available. Coupon books in \$5.00 denominations are available for those who wish to avoid remittance by check or otherwise. Most of the papers ultimately will be published in **ELECTRICAL ENGINEERING** and the **TRANSACTIONS**.

2:00 p.m.—Power Generation and Transmission

(Auditorium)

W. L. CISLER and PHILIP SPORN, Presiding

Address: "Power for War Needs." J. A. Krug, Chief of the Power Branch, O.P.M.

Report of Joint A.I.E.E.-A.S.M.E. Committee on a Specification for Speed Regulation for Prime Movers Intended to Drive Electric Generators. M. J. Steinberg, Chairman

Address: "Reaction Heating Aids Progress of Welding High Pressure Steam Pipe." C. J. Holslag, President, Electric Arc Cutting and Welding Co.

- 42-36. Synthetic or Equivalent Load-Curves. R. F. Hamilton, Consulting Engineer. 25 cents (by mail 30 cents).

- 42-53. Facilities for the Supply of Kilowatts and Kilovars. H. K. Sels and Theodore Seely, Public Service Electric and Gas Company. 15 cents (by mail 20 cents).

2:00 p.m.—Heavy Traction

(Room 502)

E. B. FITZGERALD, Presiding

- 42-54. Single-Phase A-C Electric Locomotives on the Pennsylvania Railroad—Protection and Tonnage Rating. H. C. Griffith, Pennsylvania Railroad Company. 10 cents (by mail 15 cents).

- 42-23. Progress in Design of Electrical Equipment for Large Diesel-Electric Locomotives. G. F. Smith, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).

- 42-55. Electropneumatic Brakes for High-Speed Trains with Particular Reference to Their Electrical Features. J. C. McCune, Westinghouse Air Brake Company. 15 cents (by mail 20 cents).

2:00 p.m.—Conference on National Defense Lighting

(Room 501)

E. M. STRONG, Presiding

A symposium has been arranged on the part that modern lighting will play in civilian defense. Emphasis will be placed on the research and test data now available as a result of many investigations undertaken during the past year. The speakers have been actively engaged in these investigations and are well qualified to discuss authoritatively the following subjects:

- †CP. A Civilian Defense Program for the United States. Colonel Walter P. Burn, Office of Civilian Defense, Washington, D. C.

- †CP. Lighting for Adequate Civilian Defense during Black-Outs. S. G. Hibben, Westinghouse Lamp Division, and Kirk M. Reid, General Electric Company.

- †CP. Civilian Defense Lighting from the Military Point of View. Lieutenant-Colonel Edward B. Towns, U. S. Army 2nd Defense Area.

Discussions on all subjects by those attending the conference are invited.

†CP.: Conference presentation; no advance copies are available; not intended for publication in TRANSACTIONS.

6:30 p.m.—Eta Kappa Nu Award Dinner

F. X. BURKE, Presiding

Award to Cleo Brunetti (Univ. of Minn. '32, Ph.D. '37)
Honorable Mention: George F. Leydorf (Univ. of Cinn. '31,
M.S. '33)

Simon Ramo (Univ. of Utah '33, Ph.D. Cal. Inst. of Tech.,
'36)

Dr. Cleo Brunetti and Dean R. L. Sackett will be the principal speakers of the evening

Dinner at Hotel Henry Hudson, Tudor Room, 353 West 57th Street. Reservations through R. W. Pashby, 11 Park Place—Tickets \$2.00

Tuesday, January 27

9:30 a.m.—Switching Equipment

(Auditorium)

J. R. NORTH, Presiding

- 42-12. Field Tests on High-Capacity Station Breakers. H. D. Braley, Consolidated Edison Company of New York, Inc. 10 cents (by mail 15 cents).
- 42-30. Field Tests on High-Capacity Air-Blast Station-Type Circuit Breakers. H. E. Strang and W. F. Skeats, General Electric Company. 10 cents (by mail 15 cents).
- 42-41. A 2,500,000-Kva Compressed-Air Powerhouse Breaker. L. R. Ludwig, H. M. Wilcox, and B. P. Baker, Westinghouse Electric and Manufacturing Company. 15 cents (by mail 20 cents).
- 42-38. A Fast Circuit Breaker. D. I. Bohn, Aluminum Company of America, and Otto Jensen, I-T-E Circuit Breaker Company. 10 cents (by mail 15 cents).
- 42-9. Field Tests and Performance of a High-Speed 138-Kva Air-Blast Circuit Breaker. Philip Sporn, American Gas and Electric Service Corporation, and H. E. Strang, General Electric Company. *Presentation by title.* 10 cents (by mail 15 cents).
- 42-26. High-Capacity Circuit-Breaker Testing Station. J. B. MacNeill and W. B. Batten, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).

9:30 a.m.—Auxiliary Traction

(Room 501-A)

E. B. FITZGERALD, Presiding

- 42-56. Acoustics and the Quiet Train Ride. William A. Jack, Johns-Manville Research Laboratories. 25 cents (by mail 30 cents).
- 42-51. Progress in Development of Trolley Coach Overhead, Reflected in Higher Service Standards. L. W. Birch, Ohio Brass Company. 15 cents (by mail 20 cents).

Winter Convention

9:30 a.m.—Communication

(Room 501-B)
HARADEN PRATT, Presiding

- 42-6. Frequency-Modulated Carrier Telegraph System. F. B. Bramhall and J. E. Boughtwood, Western Union Telegraph Company. 10 cents (by mail 15 cents).
- 42-57. A New Instrument for Recording Transient Phenomena. S. J. Begun, The Brush Development Company. 10 cents (by mail 15 cents).
- 42-58. Recent Developments in Burying Telephone Cables. Donald Fisher and T. C. Smith, American Telephone and Telegraph Company. 10 cents (by mail 15 cents).

9:30 a.m.—Standards Session and Conference

(Room 502)
R. T. HENRY, Presiding

- 42-59. "Hot-Spot" Winding Temperatures in Self-Cooled Oil-Insulated Transformers. F. J. Vogel and Paul Narbutovskih, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- CP.† Application of Apparatus and Conductors under Various Ambient Temperature Conditions. R. E. Hellmund and P. H. McAuley, Westinghouse Electric and Manufacturing Company
- No. 1A. Report on General Principles for Rating of Electrical Apparatus for Short Time, Intermittent or Varying Duty. P. L. Alger, Chairman, AIEE Standards Co-ordinating Committee No. 4.
- C.P.† The Thermal Co-ordination of Low-Voltage A-C Circuits. B. W. Jones, General Electric Company
- Reports by Co-ordinating Committee Chairmen

2:00 p.m.—System Switching

(Auditorium)
J. R. NORTH and PHILIP SPORN, Presiding

- 42-24. High-Speed Single-Pole Reclosing. J. J. Trainor, Public Service Company of Indiana, Inc.; J. E. Hobson, Illinois Institute of Technology; and H. N. Muller, Jr., Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- 42-35. Relays and Breakers for High-Speed Single-Pole Tripping and Reclosing. S. L. Goldsborough and A. W. Hill, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).

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† CP.: Conference paper; no advance copies available; not intended for publication in TRANSACTIONS.

TUESDAY—Continued

- 42-31. Analysis of the Application of High-Speed Reclosing Breakers to Transmission Systems. S. B. Crary, L. F. Kennedy, and C. A. Woodrow, General Electric Company. 25 cents (by mail 30 cents).
- 42-2. Relative Value of Different Types of Overcurrent Protection for Distribution Circuits. G. F. Lincks, General Electric Company. 10 cents (by mail 15 cents).
- 42-8. Performance of Ground Relayed Distribution Circuits during Faults to Ground. C. L. Gilkeson, Virginia Electric and Power Company, and P. A. Jeanne and J. C. Davenport, Jr., Bell Telephone Laboratories, Inc. 10 cents (by mail 15 cents).

2:00 p.m.—Educational Session and Conference

(Room 501-A)
H. N. WALKER, Presiding

- CP.† A Backward Look for a Forward Plan. F. C. Hockema, Purdue University
- CP.† Refresher Programs at the Graduate Level in the Post-War Period. H. W. Bibber, Ohio State University
- 42-34. Evening Courses at Graduate Levels—A Challenge to Colleges of Engineering. Robin Beach, The Polytechnic Institute of Brooklyn. 10 cents (by mail 15 cents).

2:00 p.m.—Domestic and Commercial Applications Session and Conference

(Room 501-B)
ALEXANDER MAXWELL, Presiding

- 42-69. Utilization Voltages. H. P. Seelye, The Detroit Edison Company. 10 cents (by mail 15 cents).
- Mr. Carl F. Scott of the General Electric Company and other specially-invited speakers will discuss the various aspects of both domestic and commercial utilization of electricity.

6:00 p.m.—SMOKER

(Grand Ballroom—Hotel Commodore)

5:30 p.m. Cocktail hour	8:00 p.m. Floor Show
6:30 p.m. Dinner	9:15 p.m. Get-together

Tickets \$3.75 per person. All seats reserved—tables for ten. Make reservations through A.I.E.E. Smoker Committee and make checks payable to "Special Account A.I.E.E."

† CP.: Conference paper; no advance copies are available; not intended for publication in TRANSACTIONS.

Wednesday, January 28

10:00 a.m.—General Session

(Auditorium)

President DAVID C. PRINCE, Presiding

Opening Remarks, Philip L. Alger, Chairman, Technical Program Committee.

Presentation of Alfred Noble Prize to Robert F. Hays, Jr. by James K. Finch, Renwick Professor of Civil Engineering, Columbia University.

Address by speaker to be announced

2:00 p.m.—Symposium on Distribution Systems in War Time

(Auditorium)

PHILIP SPORN, Presiding

- 42-60. Electric Power Distribution Systems in War Time. Philip Sporn, American Gas and Electric Service Corporation. 10 cents (by mail 15 cents).
- 42-42. Power Supply to Distribution Substations in War Time. H. P. St. Clair, American Gas and Electric Service Corporation. 15 cents (by mail 20 cents).
- 42-61. Distribution Substations and War-Time Necessities. F. C. Poage and M. W. Reid, Ebasco Services, Inc. 10 cents (by mail 15 cents).
- 42-62. Underground Distribution Systems in War Time. L. R. Gaty, Philadelphia Electric Company. 15 cents (by mail 20 cents).
- 42-45. Overhead Distribution Systems in War Time. Harold Cole, The Detroit Edison Company. 10 cents (by mail 15 cents).

2:00 p.m.—Conference on "How Can the Institute Sections and Members Be Most Helpful in the Present Emergency?"

(Room 501-B)

P. L. ALGER, Presiding

- †CP. Report on Activities of Local Engineering Councils in the United States, Based on Discussion at the Conference Held During the South West District Meeting in St. Louis. F. A. Cowan, Vice-Chairman, Technical Program Committee.
- †CP. Regional Planning in the State of Pennsylvania. R. H. Smith, Deputy Secretary, Department of Commerce, Commonwealth of Pennsylvania.

2:00 p.m.—Basic Sciences

(Room 501-A)

W. A. LEWIS, JR., Presiding

- 42-43. Saturated Synchronous Machines under Transient Conditions in the Pole Axis. Reinhold Rudenberg, Harvard University. 20 cents (by mail 25 cents).

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- 42-27. Formulas for the Magnetic Field Strength Near a Cylindrical Coil. H. B. Dwight, Massachusetts Institute of Technology. 20 cents (by mail 25 cents).
- 42-33. The Electric Strength of Nitrogen and "Freon" under Pressure. H. H. Skilling, Stanford University, and W. C. Brenner, Westinghouse Electric and Manufacturing Company. 15 cents (by mail 20 cents).

8:00 p.m.—EDISON MEDAL PRESENTATION PROGRAM AND ADDRESS

(Engineering Auditorium)

Medalist: Dr. John B. Whitehead, Director
School of Engineering, The Johns Hopkins University

Address: "A Peace Worth Fighting For"
Dr. William E. Wickenden, President
Case School of Applied Science

Thursday, January 29

9:30 a.m.—Lightning

(Room 501)

PHILIP SPORN, Presiding

- 42-22. Impulse and Sixty-Cycle Characteristics of Driven Grounds—II. P. L. Bellaschi and R. E. Armington, Westinghouse Electric and Manufacturing Company, and A. E. Snowden, Carnegie Institute of Technology. 25 cents (by mail 30 cents).
- 42-14. Shielding of Substations. C. F. Wagner, G. D. McCann, and C. M. Lear, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- 42-37. The Influence of Towers and Conductor Sag on Transmission Line Shielding. R. W. Sorensen and R. C. McMaster, California Institute of Technology. 15 cents (by mail 20 cents).
- 42-16. Lightning Investigation at High Altitudes in Colorado. L. M. Robertson, Public Service Company of Colorado, and W. W. Lewis and C. M. Foust, General Electric Company. 20 cents (by mail 25 cents).
- 42-18. Lightning Investigation on 132-Kv Transmission System of the American Gas and Electric Company. I. W. Gross and G. D. Lippert, American Gas and Electric Service Corporation. 10 cents (by mail 15 cents).
- 42-74. Lightning Investigation on Wallenpaupack—Siegfried 220-Kv Line of Pennsylvania Power and Light Company. Edgar Bell and F. W. Packer, Pennsylvania Power and Light Company. 15 cents (by mail 20 cents).

Winter Convention

9:30 a.m.—Symposium on Asynchronous Machinery

(Room 502)

C. M. GILT, E. E. MINOR, and J. J. ORR, Presiding

- 42-63. Variable Speed Drive for U. S. Army Air Corps Wind Tunnel at Wright Field. A. M. Dickey, Army Air Corps, and C. M. Laffoon and L. A. Kilgore, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- 42-64. A Study of the Modified Kramer or Asynchronous-Synchronous Cascade Variable Speed Drive. M. M. Liwschitz, The Polytechnic Institute of Brooklyn, and L. A. Kilgore, Westinghouse Electric and Manufacturing Company. 20 cents (by mail 25 cents).
- 42-65. Large Adjustable Speed Wind Tunnel Drive. C. C. Clymer, General Electric Company. 10 cents (by mail 15 cents).
- 42-4. The Doubly-Fed Machine. C. Concordia, S. B. Cray, and Gabriel Kron, General Electric Company. 10 cents (by mail 15 cents).
- 42-3. Equivalent Circuits for the Hunting of Electrical Machinery. Gabriel Kron, General Electric Company. 10 cents (by mail 15 cents).

2:00 p.m.—Lightning Arresters and Protection

(Room 501)

J. R. NORTH and C. F. WAGNER, Presiding

- 42-66. Back-Up Protection of the Boulder-Dam-City of Los Angeles Transmission Line. C. P. Garman, Bureau of Power and Light, City of Los Angeles, and L. F. Kennedy, General Electric Company. 10 cents (by mail 15 cents).
- *A.C.O. 42-17. Field Investigation of the Characteristics of Lightning Currents Discharged by Arresters. I. W. Gross, American Gas and Electric Service Corporation, and G. D. McCann and Edward Beck, Westinghouse Electric and Manufacturing Company. 15 cents (by mail 20 cents).
- 42-28. Distribution-Type Lightning Arrester Performance Characteristics (Report). Lightning Arrester Subcommittee, Committee on Protective Devices. 10 cents (by mail 15 cents).
- 42-10. Temperature and Electric Stress in Impregnated Paper Insulation. J. B. Whitehead and W. H. MacWilliams, Jr., The Johns Hopkins University. 10 cents (by mail 15 cents).

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* A.C.O.: Advance copies only available; not intended for publication in TRANSACTIONS.

THURSDAY—Continued

2:00 p.m.—Air Transportation Session and Conference

Attendance restricted to members of the Institute who are citizens of the U. S. A.

(Room 502)

E. E. MINOR, Presiding

- **A Direct-Current Telemeter or D-C Selsyn for Aircraft. R. G. Jewell and H. T. Faus, General Electric Company
- **The Magnetic Drag Tachometer. R. G. Ballard, General Electric Company
- **Aircraft Voltage Regulator and Cutout. R. C. Jones, D. W. Exner, and S. H. Wright, Westinghouse Electric and Manufacturing Company
- **The Application of Voltage Regulators to Aircraft Generators. L. W. Thompson and F. E. Crever, General Electric Company

** Advance pamphlet copies not available.

7:00 p.m.—DINNER-DANCE—BUFFET SUPPER

The Waldorf-Astoria
Park Avenue & 50th Street
New York City

P R O G R A M

Dinner on the Starlight Roof.....	7:00 to 9:00 p.m.
President's Reception in the Palm Room.....	9:00 to 9:30 p.m.
Dancing on the Starlight Roof.....	9:30 to 2:00 a.m.
Buffet Supper in the Palm Room.....	12:00 to 2:00 a.m.

Music by JERRY SEARS' ORCHESTRA

Tickets for Dinner-Dance.....	\$6.00 per person
Tickets for Dance-Buffer Supper.....	\$3.75 per person
Tickets for Buffet Supper.....	\$2.25 per person

Please purchase tickets early and indicate names of guests and desired seating arrangements. (Tables seat 8, 10, or 12 persons.) Make reservations through A.I.E.E. Dinner-Dance Committee and make checks payable to "Special Account A.I.E.E."

Hotel parking fee \$1.00—use 50th Street automobile entrance. Due to present emergency street parking is not recommended.

Friday, January 30

9:30 a.m.—Protective Relays

(Room 501)
J. R. NORTH, Presiding

- 42-13. Multichannel Carrier-Current Facilities for a Power Line. P. N. Sandstrom and G. E. Foster. 10 cents (by mail 15 cents).
- 42-20. Loss-of-Field Protection for Generators. G. C. Crossman, H. F. Lindemuth, and R. L. Webb, Consolidated Edison Company of New York, Inc. 20 cents (by mail 25 cents).
- 42-39. Transient Characteristics of Current Transformers during Faults. C. Concordia and H. S. Shott, General Electric Company, and C. N. Weygandt, University of Pennsylvania. 20 cents (by mail 25 cents).
- 42-11. Current Transformer Performance Based on Admittance Vector Locus. A. C. Schwager, Pacific Electric Manufacturing Corporation. 10 cents (by mail 15 cents).
- 42-40. Linear Couplers for Bus Protection. E. L. Harder, E. H. Klemmer, W. K. Sonnemann, and E. C. Wentz, Westinghouse Electric and Manufacturing Company. 20 cents (by mail 25 cents).

9:30 a.m.—Electrical Machinery

(Room 502)
C. M. GILT, Presiding

- 42-1. Progress Report of D-C Testing of Generators in the Field. E. R. Davis and M. F. Leftwich, Duke Power Company. 10 cents (by mail 15 cents).
- 42-67. Four-Winding Transformers. T. C. McFarland, University of California. 15 cents (by mail 20 cents).
- 42-68. Correction for Saturation. T. C. McFarland. University of California. 10 cents (by mail 15 cents).
- 42-44. Current Loci for the Capacitor Motor. T. C. McFarland, University of California. 10 cents (by mail 15 cents).
- 42-25. Resistance Welding Transients. E. E. Kimberly, Ohio State University. 10 cents (by mail 15 cents).

9:30 a.m.—Conference on Arc Back in Mercury-Arc Rectifiers

(Room 503)
S. B. INGRAM, Presiding

Sponsored by the Joint Subcommittee on Electronics this conference will take the form of an informal round-table discussion. There will be no fixed program and the objective will be to encourage as many as possible to take part in order that a profitable interchange of experiences may be obtained.

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FRIDAY—Continued

2:00 p.m.—Instruments and Measurements

(Room 503)

F. B. SILSBEE, Presiding

- 42-15. Measurement of Maximum Demand. P. M. Lincoln, Therm-Electric Meters Co., Inc. 10 cents (by mail 15 cents).
- 42-5. The Acceleration Oscillogram Method of Motor Torque Measurement. C. R. Atkinson and E. G. Downie, General Electric Company. 10 cents (by mail 15 cents).
- 42-70. Design of Long-Scale Indicating Instruments. A. J. Corson, R. M. Rowell, and S. C. Hoare, General Electric Company. 20 cents (by mail 25 cents).
- 42-71. Improvement in Modern Meter Testing Technique. E. E. Lynch and M. A. Princi, General Electric Company. 15 cents (by mail 20 cents).

2:00 p.m.—Industrial Power Applications

(Room 502)

J. J. ORR, Presiding

- 42-21. The Fundamentals of Industrial Distribution Systems. D. L. Beeman and R. H. Kaufmann, General Electric Company. 20 cents (by mail 25 cents).
- 42-29. Electrical Drives for Wide Speed Ranges. G. A. Caldwell and W. H. Formhals, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).
- 42-19. A Static Voltage Regulator Insensitive to Load Power Factor. C. M. Summers and T. T. Short, General Electric Company. 10 cents (by mail 15 cents).
- 42-32. A New Voltage Regulating Relay Plus Line Drop Compensator. H. J. Carlin, Westinghouse Electric and Manufacturing Company. 10 cents (by mail 15 cents).

2:00 p.m.—Conference on Influence of Acceptance and Maintenance Testing on Successful Relay Design and Operation

(Room 501)

L. F. KENNEDY, Presiding

This conference will be devoted particularly to the value of testing in bringing out the need for improvement in various types and forms of relays. The primary objective of acceptance and maintenance testing is the prevention or elimination of incorrect relay operation and the conference will deal with difficulties experienced with protective relays and the remedies which have been found successful. The limitations in application as found by relay test characteristics will also be discussed. Three discussion leaders will present their views on this interesting and important subject, after which the conference will be opened for general discussion. The chairman is L. F. Kennedy and the discussion leaders will be Messrs. M. W. Evans, Duquesne Light Company; J. P. Kisch, Public Service Electric and Gas Company; and A. W. Rauth, Consumers Power Company.

LADIES' PROGRAM

(Headquarters — Alcove — Tenth Floor)

Monday, January 26

9:00 a.m.—Registration

Tuesday, January 27

12:30 p.m.—Luncheon-Bridge-Costume Review

The review will be staged by The Traphagen School of Fashion and will include a showing of "Defense Costumes." Neptune Room, Hotel Pierre, 5th Avenue and 61st Street. Register in advance. Tickets \$2.00 per person.

Evening —Broadcast tickets obtainable at Ladies' Headquarters

Wednesday, January 28

9:30 a.m.—Inspection of Red Hook Housing Development and Slum Clearance Project — also Bache Museum

As this trip will require auto transportation, those ladies interested must register in advance.

8:00 p.m.—Edison Medal Presentation Program and Address (Engineering Auditorium)

Medalist: Dr. John B. Whitehead, Director, School of Engineering, The Johns Hopkins University

Address: "A Peace Worth Fighting For,"
Dr. William E. Wickenden, President, Case School of Applied Science

Thursday, January 29

7:00 p.m.—Dinner-Dance at the Waldorf-Astoria

Other Points of Interest Which May Be Visited

Hearst Antique Exhibit at Gimbel's
Latin American Fair at Macy's
Museum of City of New York
St. John's Cathedral

MEMORANDA

OFFICERS OF A.I.E.E. 1941-1942

President

David C. Prince

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COMMITTEE MEETINGS**Monday, January 26**

	Room
10:00 a.m.—Subcommittee on Voltage Transients in Arc-furnace Circuits	903
10:00 a.m.—Joint Committee on Oil Circuit Breakers.....	
2:00 p.m.—Education	1101
2:00 p.m.—Electrochemistry and Electrometallurgy	903
2:00 p.m.—Lamme Medal	1001

Tuesday, January 27

9:00 a.m.—Distribution Type Protector Tubes	
10:00 a.m.—National Nominating	1001
10:00 a.m.—Sections	1101
2:00 p.m.—Joint Committee on Bushing Standardization	1101
2:00 p.m.—Land Transportation	ASCE Board Room, 15th Floor
2:00 p.m.—Membership	1001
2:00 p.m.—Planning and Coordination	903

Wednesday, January 28

10:00 a.m.—Protective Devices Executive Group	1001
2:00 p.m.—Electrical Machinery	1101
2:00 p.m.—Institute Policy	1001
2:00 p.m.—Safety	903
2:30 p.m.—Standards Coordinating Committee No. 1 ASCE Board Room, 15th Floor	

Thursday, January 29

9:30 a.m.—Basic Sciences	903
9:30 a.m.—Communication	ASCE Board Room, 15th Floor
9:30 a.m.—Subcommittee on Stationary Contact Surfaces, Standards Coordinating Committee No. 7	1101
2:00 p.m.—Board of Directors	1001
2:00 p.m.—Subcommittee on Temperature Measurements ASCE President's Room, 15th Floor	

Friday, January 30

11:00 a.m.—Joint Subcommittee on Electronics	1001
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