

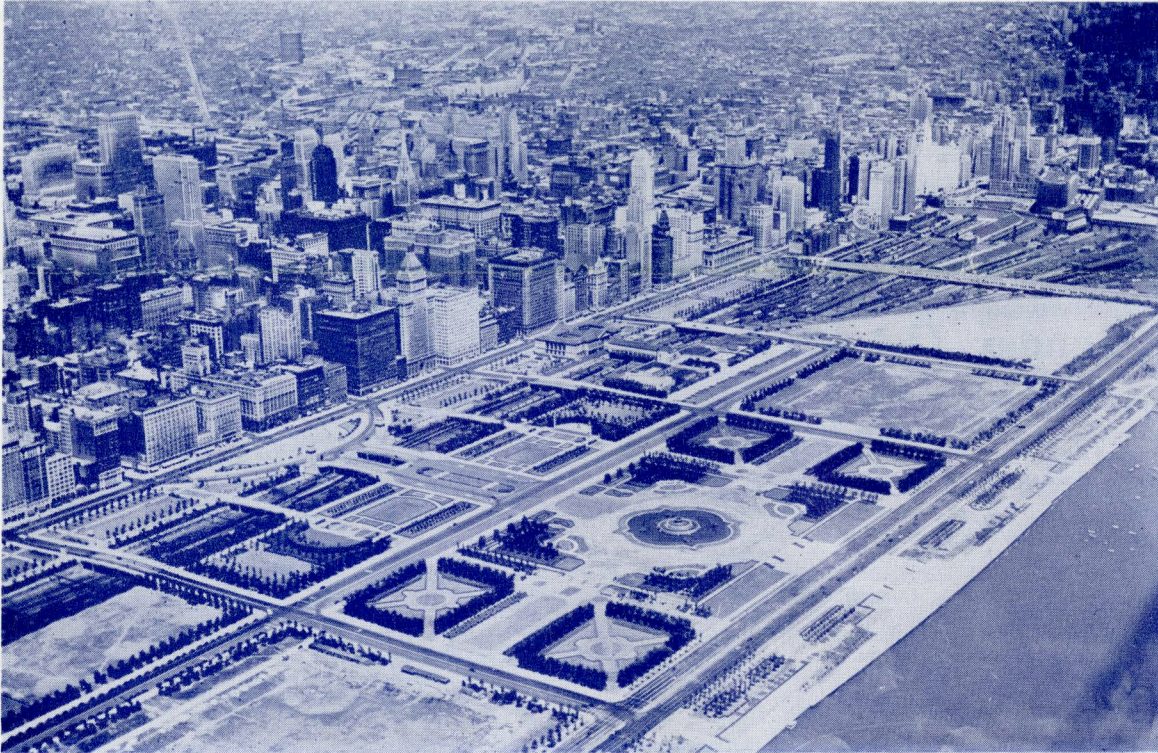


Fall General Meeting

October 7-11, 1957

CHICAGO, ILLINOIS

Headquarters
Morrison Hotel



View of Chicago

United Press Photo

For the fourth year in succession, the Fall General Meeting of the AIEE will be held in Chicago. This year the meeting will be held from October 7 to 11, and the meeting headquarters will again be at the Morrison Hotel. The technical program, inspection trips and social activities will occupy the entire facilities of the Morrison during the 5-day meeting.

Chicago is the center of one of the greatest diversified industrial areas in the world and its easy accessibility by air, rail, and automobile from all parts of the continent makes it an unusually favorable place for this important meeting.

At the General Session to be held on Monday afternoon, October 7, the **Institute's Medal** for outstanding service as a teacher in Electrical Engineering Education will be awarded to W. L. Everitt, Dean, College of Engineering, University of Illinois.

On Thursday, October 10, in the beautiful Terrace Casino of the Morrison Hotel the **Sperry Award** for developing the Diesel-Electric Locomotive will be awarded to Harold L. Hamilton, Richard M. Dilworth and Eugene W. Kettering at a luncheon scheduled for 12 noon. The award will also go to the Controls, Electrical Engineering, Locomotive and Mechanical Engineering Sections of the Engineering Department of the Electro-Motive Division of the General Motors Corp. Tables of 6, 8, or 10 will be reserved when ordered in this manner by groups or organizations. Individual ticket purchasers will be taken care of on a first come, first served basis. The cost of the luncheon is \$5.00 per person. Tickets and reservations may be pro-

cured from Mr. E. H. Finch, c/o Sargent and Lundy, Engineers, 140 South Dearborn, Chicago 3, Illinois.

TECHNICAL SESSIONS: A large and varied technical program has been planned with special attention being given to the subject of Computing Devices, Transmission & Distribution and Communication. Two sessions of note will be on Nuclear Reactors. The subject of Shopping Center Distribution will be covered in a separate session. Sessions are also scheduled by the General Committees on Education and Safety.

SOCIAL ACTIVITIES: Reception Tea and Hospitality Hour—Social activities will begin on Sunday afternoon, October 6, from 4:00 to 6:00 p.m., with an informal reception tea, and with a hospitality hour sponsored by the Chicago Section, AIEE, for members of the AIEE and their families.

The Fall Frolics will be held on October 9th in the Terrace Casino of the Morrison Hotel. Tickets will go on sale September 1st and it looks like it will be a sell-out so get your order in early.

Last Fall the party was a gay and colorful affair. The women added spice to the occasion and they will be welcomed back this year. An excellent floor show after dinner is in store and dancing will follow. Dress will be informal. The tickets will be \$11.00 each or \$22.00 per couple. If you haven't ordered your tickets yet, send a check to Mr. M. J. O'Laughlin, Southerland Engineers, 222 W. Adams, Chicago 6, Illinois.

Continued on page 7

ADVANCED COPIES OF PAPERS

Members may obtain preprints of numbered papers at the uniform price of 40¢ each (80¢ each to nonmembers), by sending enclosed order form and remittance to the AIEE Order Department, 33 West 39th Street, New York 18, N. Y. Mail orders (particularly from out-of-town members) are advisable, inasmuch as an adequate supply of each paper at the meeting cannot be assured. Coupon books in \$10 denominations are available for those who wish to avoid remittance by check or otherwise. The Transactions Papers will also be published in the bimonthly publications.

Note: Unnumbered Conference Papers (CP.*) may be available at or after the meeting, if copies are provided by the author. They are not intended for publication in the Transactions and are not presently scheduled for reproduction in any form by the Institute.

Note: The TRANSACTIONS papers will be printed in the bimonthly publications as follows:

- I COMMUNICATIONS AND ELECTRONICS.
- II APPLICATIONS AND INDUSTRY.
- III POWER APPARATUS AND SYSTEMS.

Monday, October 7

9:00 a.m.—Industrial Power Systems

- 57-1021. "Criteria for Industrial Application of Single Phase Transmission Lines, 400 to 20,000 Cycles," W. A. Munson and A. J. Germain, Westinghouse Electric Corp.
- CP57-1022. "Basic Considerations of DC Power System Design," W. A. Munson, Westinghouse Electric Corp.
- CP.* "400 Cycle Electrical Distribution Systems for Power or Lighting," D. L. Johnson, General Electric Co.
- CP.* "Testing the Adequacy of Industrial Power Distribution Systems," A. Durand and D. Dalasta.

9:00 a.m.—Power Reactor Instrumentation

- CP.* "Argonne Low Power Reactor Instrumentation Design," H. H. Hooker, Argonne National Laboratory.
- CP.* "Problems in Reactor Instrumentation for the Experimental Breeder Reactor #2," A. Lovoff and J. R. Simanton, Argonne National Laboratory.
- CP.* "On the Application of a Direct Energy Balance Instrumentation System for Power Reactors," R. N. Brey and R. H. Morse, Leeds and Northrup Co.



Electro-Motive Division, General Motors Corporation

CP.* "Reliability of Instruments Power Supply for Reactors," John Parnell and C. W. Sundin, Minneapolis-Honeywell Regulator Co.

CP.* "Major Design Concept of the Instrumentation for the Country's First Privately Financed Atomic Power," E. P. Diehl, General Electric Company.

9:00 a.m.—Power Systems Communications

- 57-1091. "Protection Equipment for Power Company Communication Lines," Delmar L. Brown and Leon N. Sherban, Portland General Electric Co.
- CP57-1092. "Fully Automatic Dialing System for Two Canadian Power Utilities," Otto Kreis, Brown Boveri (Canada) Ltd.
- 57-1093. "Coupling Methods for Power Line Carrier Systems," D. E. Jones, Hydro-Electric Power Commission of Ontario and P. W. Waddington, Spilsbury and Tindall, Ltd.

9:00 a.m.—Ethics

- CP.* "Professional Conduct—The Activities of Other Organizations In This Field and Their Relation to AIEE," P. L. Alger.
- CP.* "A Proposed Code of Ethics for Recruiting," E. L. Obert, American Society of Engineering Education.

9:00 a.m.—Semiconductor Circuits

- CP.* "Thermal Stability of Junction Transistors and Its Effect on Maximum Power Dissipation," H. C. Lin.
- 57-1023. "A Generalized Theory of Transistor Bias Circuits," Herbert Hellerman, University of Delaware.
- CP57-1024. "Shunt Feedback in Transistor Amplifiers," R. J. Patch, General Electric Co.
- CP57-1025. "Graphical Analysis of Transistor Switching Circuits," M. Rubino, A. Messey, and H. Yamada, University of Pennsylvania.
- CP57-1026. "Transistorized Television Vertical Deflection System," W. Palmer and G. Schiess, Sylvania Electric Products, Inc.

2:00 p.m.—General Session

- "Welcoming Address", Thomas G. Ayers, Vice-President, Commonwealth Edison Co.
- "Response", President Walter J. Barrett.
- Presentation of the AIEE Medal in Electrical Engineering Education to W. L. Everitt, Dean, College of Engineering, University of Illinois.
- "Address", Robert W. Galvin, President, Motorola Inc.

Tuesday, October 8

9:00 a.m.—Symposium on: "Electric Supply to Large Shopping Centers"

- CP57-1072. "Electric Supply to Detroit Area Shopping Centers," W. E. Groves, The Detroit Edison Co.
- CP57-1073. "Electric Service to Shopping Centers on Virginia Electric and Power Company's System," R. C. Daffron, Virginia Electric and Power Co.
- CP57-1071. "Electric Service Supply to Roosevelt Field Shopping Center," R. M. Grogan, Long Island Lighting Co.
- CP.* "Supply to Large Shopping Areas in the Chicago Metropolitan Area," W. R. Zimmerman, Commonwealth Edison Co.

9:00 a.m.—Switchgear

- 57-727. "Severe Rates of Rise of Recovery Voltage Associated With Transmission Line Short Circuits," W. F. Skeats, C. H. Titus and W. R. Wilson, General Electric Company. Re-presented for Discussion.

57-1032. "4160 Volt, 350 MVA. Metal-Clad Switchgear With Symmetrical Ratings," E. B. Rietz, G. O. Perkins, and W. A. Carter, I-T-E Circuit Breaker Company.

57-1031. "An Outdoor Metal-Clad Switchgear Unit With a Weather-Protected Operating Aisle," H. B. Wortman, Westinghouse Electric Corp.

CP57-1049. "Airblast Circuit Breaker Characteristics," W. O. Rowan, The Hydro-Electric Power Commission of Ontario.

CP57-1100. "Vacuum Switch Properties For Power Switching Applications," H. C. Ross, Jennings Radio Mfg. Corp.

9:00 a.m.—Rotating Machinery

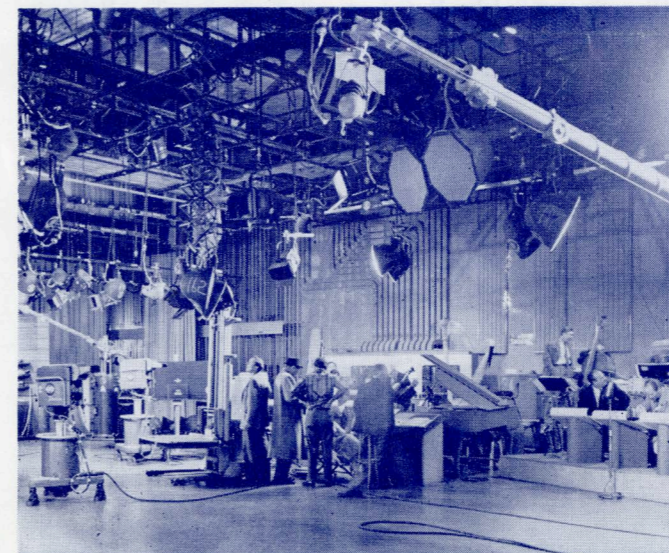
- CP57-1005. "A Modified Adjustable Speed Brushless Induction Motor," A. M. El Gammal, Ain Shams University.
- 57-1003. "Simulation of the Operational Impedances of Synchronous Machines on Network Analysers," Colin Adamson and A. M. S. El-Serafi, Manchester College of Science and Technology.
- 57-1006. "Gas Flow and Heat Transfer in Conductor Cooled Machines," L. T. Rosenberg, Allis-Chalmers Mfg. Co.
- 57-1004. "A Variable Speed D-C Motor Drive Employing The Xatron, A Grid Controlled Mercury Arc Rectifier," A. J. Humphrey and K. L. Shriver, Reliance Electric and Engineering Company.

9:00 a.m.—Television & Aural Broadcasting

- CP57-1007. "Color and Monochrome Cathode Ray Tube Performance Tests," Charles F. Otis, Philco Corporation.
- CP.* "Prediction and Measurement of the Coverage of a Television Station," D. W. Peterson, RCA Laboratories.
- CP.* "Status Report on Video Tape Applications in Broadcasting," Howard A. Chinn, CBS Television.
- CP.* "A Radiating System for Television Broadcasting," Andrew Alford and Harold Leach, Alford Mfg. Company.

9:00 a.m.—General Circuit Theory

- 57-1027. "Small Signal Heterodyne Mixers With Excessive Injection Potentials," Jack F. Cline, Stanford Research Institute.
- CP57-609. "Amplitude and Frequency Stabilization of an Oscillator Using Nonlinear Elements," C. J. Triska, Iowa State College of Agriculture and Mechanical Arts. Re-presented for Discussion.



CBS Studio, Station WBBM-TV

CP57-1028. "The Diode Reactance Modulator," G. Franklin Montgomery, National Bureau of Standards.

57-1029. "A Nonlinear Low Frequency Instability Phenomenon in Audio Amplifiers," Theron Usher, Jr., Yale University.

CP57-1030. "Equivalent Circuits of Noisy Networks," Leo Young, Westinghouse Electric Corp.

2:00 p.m.—Nuclear Reactors

- 57-1068. "Load Control for the Shippingport Nuclear Power Station," H. A. Van Wassen, Duquesne Light Co.
- 57-1069. "Engineering Design of the EBWR Facility," D. C. McClintock, Sargent and Lundy.
- CP.* "EBWR Nuclear Design and Power Station Operating Experience," J. M. Harrer.

2:00 p.m.—Rotating Machinery

- 57-1008. "Analog Computer Study of Wind Tunnel Drive," K. G. Black and R. J. Noorda, General Electric Company.
- CP.* "A Theory for Shaded-Pole Motors," F. W. Suhr, General Electric Co.
- CP.* "Switching Voltages of Induction Motors," E. C. Schrom.
- CP.* "Switching Transients in Small Motors," R. K. Drake and S. A. Zimmermann.

2:00 p.m.—Television & Aural Broadcasting

- CP.* "The Television Allocations Study Organization Its Origin, Objectives and Progress," George R. Town, Executive Director, TASO.
- CP.* "The Systems Approach to the Determination of Television Coverage," Robert H. Bowie, Sylvania Electric Products, Inc.
- CP.* "Summary of Performance Characteristics of Television Receiving and Transmitting Equipment," Wm. J. Morlock, General Electric Co. and Wm. D. Swinyard, Hazeltine Research, Inc.
- CP.* "The Measurement of Television Field Intensities and the Relationship Between Field Intensity and Picture Quality," Howard T. Head, A. D. Ring and Associates.

2:00 p.m.—Safety

- CP57-1009. "The Scope and Limitations of Cardiac Resuscitation," Archer S. Gordon, M.D., University of Illinois, College of Medicine.
- CP57-1010. "The Adjunctive Use of Mechanical Resuscitation in Electrical Contact Accidents," T. M. C. Martin, University of California.
- CP57-1011. "The Principles and Practice of Emergency Mechanical Resuscitation," Charles W. Frye, M.D. and Archer S. Gordon, M.D., University of Illinois, College of Medicine.
- CP57-1012. "A Comparison of Mouth-to-Mouth and Manual Artificial Respiration Techniques," Archer S. Gordon, M.D. and Charles W. Frye, M.D., University of Illinois, College of Medicine.
- CP.* "A Demonstration of Artificial Respiration," Archer S. Gordon, M.D., et al, University of Illinois, College of Medicine.

2:00 p.m.—Graduate Honors Cooperative Programs

- John M. Cage, Hewlett-Packard Co.
- John F. Calvert, University of Pittsburgh.
- Everett Strong, Cornell University.
- Robert Whitehorne, International Business Machines.

Wednesday, October 9

9:00 a.m.—Metallic Rectifiers

- CP57-1046. "III-V Compound Rectifiers," G. B. Kich, Fansteel Metallurgical Corporation.
- CP.* "Gallium Arsenide Phosphide PHN Junctions, G. A. Jenny, RCA.
- CP57-1047. "Structure and Characteristics of SiC Light-Emitting Junctions," Lyle Patrick, Westinghouse Electric Corp.
- CP.* "Preparation of Silicon Carbide, Single Crystal and Use in Rectifiers," L. Kroko and H. Chang, Westinghouse Electric Corporation.
- CP57-1048. "Anodized Titanium-Solid Lead Peroxide Rectifier," Samuel Ruben, Ruben Laboratories.

9:00 a.m.—Symposium on Substations and Electric Service

- CP.* "How Substation Design and Operation Reflect Customer Service Continuity Requirements," L. M. Olmsted
- CP.* "Corrosion in Substation Grounding," P. M. Black.

9:00 a.m.—Computing Devices

- 57-1053. "The Transformer Analogue Computer," P. Venkata Rao and G. Krishna, Indian Institute of Science.
- CP.* "Some Aspects of the Reliability of Analog-to-Digital Conversion," A. Yeiser, Applied Electronics Laboratories.
- CP.* "Digital Camera Coder for Spatial Angles," J. S. Ward, Massachusetts Institute of Technology.
- 57-684. "Analog Computer Study of the Transient Performance of a Dual Cycle Boiling Water Reactor Nuclear Power Plant," David W. Leiby, General Electric Co. Re-presented for Discussion.
- 57-685. "A Rolling Mill Analogue for the Study of Non-Linear Problems Associated With Gauge Control," L. R. Hulls and K. R. Canfor, Canadian Westinghouse Co. Re-presented for Discussion.

9:00 a.m.—Communication Theory

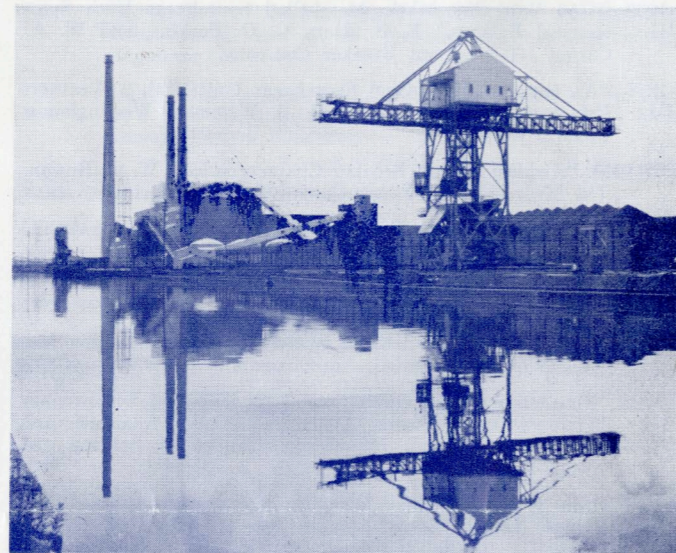
- CP.* "The 'Megacoder'—A High-Speed Large-Capacity Micro-miniature Decoder for Selective Communication," Harry Kihn and W. E. Barnette, RCA Laboratories.
- CP57-1041. "Binary Symmetric Decision Feedback Systems," Bernard Harris and K. C. Morgan, New York University.
- 57-1042. "Kineplex, A Bandwidth Efficient Binary Transmission System," R. R. Mosier and R. G. Clabaugh, Collins Radio Company.
- CP.* "An Experimental Study of a Binary Code," W. Wesley Peterson, University of Florida.

9:00 a.m.—Power Generation

- Panel Discussion—"The Relation of Automatic Transfer of Steam Station Auxiliaries to Station Protection."
- CP57-1094. "Special Features of 5000-KW EBWR Turbine Condenser and Pump," C. H. Morris, K. H. Gruenwald and C. E. Kenny, Allis-Chalmers Mfg. Co.

9:00 a.m.—Feedback Control Systems

- 57-1033. "The Selection and Use of Servo Performance Criteria," II W. C. Schultz and V. C. Rideout, University of Wisconsin.
- 57-1036. "Extended Switching Criterion for Second Order Saturated Servomechanisms," J. W. Diesel, Washington University.
- CP57-1035. "Analyses of Servomechanisms by Describing Function Method on a Plane With Parameters as Coordinates," Toshio Numakura, Takeo Miura, and Akira Kamoi, Hitachi Central Research Laboratory.



Will County Station, Commonwealth Edison Company

2:00 p.m.—Symposium on Substations and Electric Service

- CP.* "Highside Protection of Substation Transformers Without Breakers and Fuses," O. J. Rotty.
- CP.* "Voltage Regulation for Substations," H. F. Barsun.

2:00 p.m.—Transmission & Distribution

- 57-1074. "Economics of System Conversion From 27.6-KV to 33-KV III Operation," H. K. Amchin, T. May and T. J. Nagel, American Gas & Electric Service Corp.
- 57-1075. "Unbalanced Loading of Three-Phase Transformer Banks—II III —Economics," S. W. Anderson, Middle West Service Co.
- 57-1076. "Combined Single-Phase and Three-Phase Loading of Open-Delta Transformer Banks," H. M. Bankus and J. E. Gerngross, General Electric Company.

2:00 p.m.—System Engineering

- 57-1054. "Kilovar Supply in Bulk-Power Transmission Systems," III J. M. Henderson, H. O. Simmons, Jr. and J. B. Tice, General Electric Co.
- 57-1101. "A New Approach to Loss Minimization in Electric Power III Systems," John F. Calvert and T. W. Sze, The University of Pittsburgh.
- 57-1055. "Rapidly Converging Digital Load Flow," R. H. Jordan, III Indianapolis Power and Light Company.
- CP57-1056. "Extensions in Digital Load Flow Techniques Using High Speed Computer," M. S. Dyrkacz, A. F. Glimm and D. G. Lewis, General Electric Co.

2:00 p.m.—Land Transportation

- CP57-1096. "Technical Aspects of Providing Service to Single-Phase, 60 Cycle Railroad Loads," T. J. Nagel and A. F. Gabrielle, American Gas and Electric Corp.
- CP.* "Electric Equipment for the MTS High Performance Cars," M. F. Bretz.
- CP.* "Electric Locomotives for the Butte Anaconda and Pacific Railway," William Wishart, General Electric Co.
- CP.* "Electric Snowmelter Systems for Railroad Track Switches," Dr. Brewer Bretz, General Electric Co.

2:00 p.m.—Feedback Control Systems

- CP57-578. "Servo Control System for a Large Optical Tracking Instrument," Morton H. Mehr, The Perkin-Elmer Corp.

- CP57-1037. "Analysis of Multiple Sampler Systems With Finite Pulse Width (Open Loop)," G. Farmanfarma, University of California.

- CP57-1034. "Stability Study of a Third-Order Servomechanism With Multiplicative Feedback Control," Y. H. Ku, Moore School of Electrical Engineering and C. F. Chen, Christian Brothers College.

2:00 p.m.—Power Generation

- 57-1098. "Recommended Specifications for Speed-Governing of Steam Turbines Intended to Drive Electric Generators Rated 500 KW and Larger," Report of Joint AIEE-ASME Committee on Recommended Specifications for Prime Mover Speed Governing.
- 57-1099. "Grounding of Power Station 4160 Volt Auxiliary Systems," T. H. McGreer, Westinghouse Electric Corp.

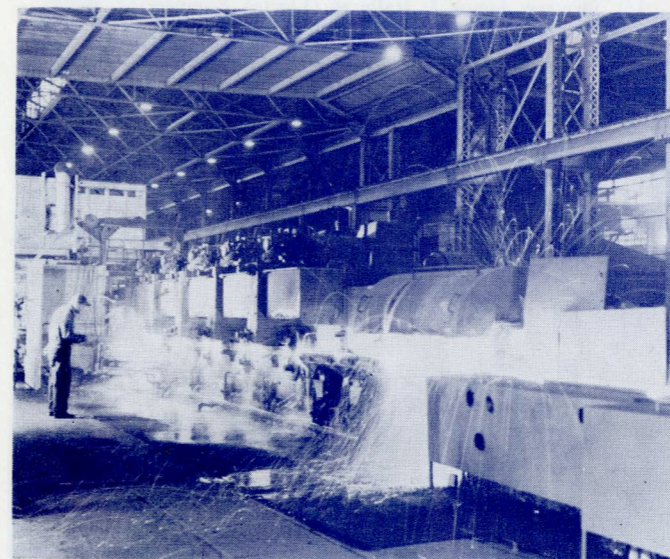
Thursday, October 10

9:00 a.m.—Transmission and Distribution

- 57-1087. "1956 Lightning Field Investigation on the OVEC 345 KV III System," R. H. Schlomann and W. S. Price, American Gas and Electric Service Corp.; J. G. Anderson, I. B. Johnson, General Electric Co.
- 57-1084. "Lightning Performance of 138 KV Twin Circuit Transmission Lines of Commonwealth Edison Company Operating Experience and Field Studies," R. W. Caswell and E. F. Koncel, Jr., Commonwealth Edison Co.; I. B. Johnson and N. R. Schultz, General Electric Co.
- 57-1085. "Field Studies of the Surge Response of a 345 KV Transmission Tower and Ground Wire," G. D. Breuer, A. J. Schultz, R. H. Schlomann and W. S. Price, General Electric Co.
- 57-548. "An Approximate Transient Solution of the Tapered Transmission Line," L. O. Barthold, General Electric Co.
- 57-1086. "Analytical Studies on Lightning Phenomena Involving Towers, Insulator Strings, and Transmission Lines," I. B. Johnson and A. J. Schultz, General Electric Co.

9:00 a.m.—Power Generation & System Engineering

- 57-1064. "Minimization of Fuel Costs By The Technique of Linear III Programming," A. P. Hayward and C. E. Taylor, Duquesne Light Co.; R. H. Kerr and L. K. Kirchmayer, General Electric Co.



Youngstown Sheet and Tube Company

- 57-1065. "Economic Considerations in Generation Scheduling Southwestern Public Service Company System," R. W. Thomas, Southwestern Public Service Co.; L. K. Kirchmayer, J. R. Wilson, General Electric Co.

- CP57-1066. "Basic Data For Load Schedule Development," F. H. Light, Sr., Philadelphia Electric Co.

- CP57-1067. "Determination of the Incremental Heat Rate Characteristic By Performance Testing," Roy W. Thomas, Southwestern Public Service Co.

9:00 a.m.—Wire Communications

- CP57-1016. "Transistorized Negative Impedance Telephone Repeaters," Robert P. Dimmer, Automatic Electric Company.
- 57-391. "The Application of Negative Impedance Repeaters on Long I Rural Telephone Lines," H. T. Uthlaut, Jr., Southern Bell Telephone & Telegraph Company. Re-presented for Discussion.
- CP57-1097. "A Miniaturized Negative Voice Repeater Employing Transistors," A. S. Howell, Stromberg-Carlson Company.
- CP.* "A Study of Negative Impedance Loading," D. F. Hoth, Bell Telephone Laboratories.

9:00 a.m.—Mining and Metal Industry

- CP.* "Standardization of Cables and Hose Conduits of Mine Motors and Controllers," J. Tindall, Reliance Electric and Engineering Co.
- CP.* "Sequence Control of Mining Belt Conveyors," Ben Harbage, Jeffrey Mfg. Co.
- CP.* "Pioneering Carrier Communications and Controls in Mines and Mills," W. Porter Place, FEMCO Inc.
- CP.* "Current Carrying Capacity of Portable Cables on Reels," John McNiff and A. H. Shepherd, Simplex Wire and Cable Co.

9:00 a.m.—Transformers

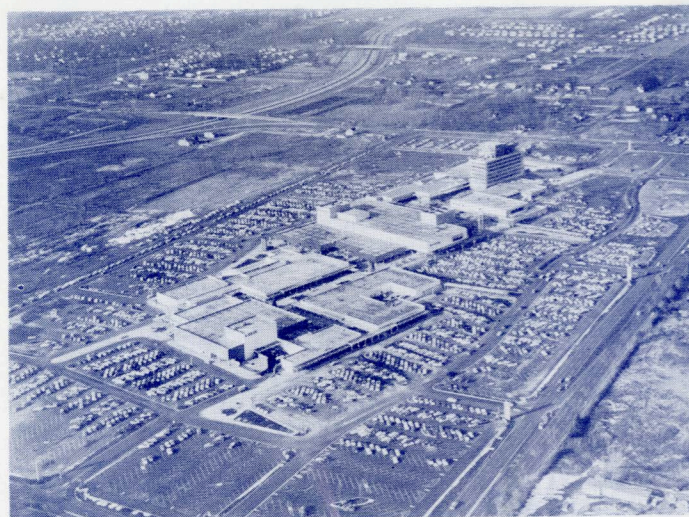
- CP57-1038. "The Significance of Transformer Functional Testing To The Operating Company," A. M. Lockie, Westinghouse Electric Corp.
- 57-1039. "The Effect of Transformer Oil Preservation Methods on the III Dielectric Strength of Oil," R. B. Kaufman, J. L. Pierce and E. R. Uhlig, General Electric Company.
- CP.* "Rapid Spot Test Methods for the Evaluation of Used Transformer Oil," R. E. Reinhard and W. E. Elliott, Allis-Chalmers Manufacturing Co.

2:00 p.m.—Computing Devices

- 57-1061. "Statistical Design Theory for Strictly Digital Sampled Data I Systems," S. S. L. Chang, New York University.
- 57-1062. "Russian To English Machine Translation With Simple Logical Processing," Robert E. Wall, Jr., University of Washington and Udo K. Niehaus, Boeing Airplane Co.
- CP57-1063. "Random Access and the Manufacturing Control Problem," Claude A. R. Kagan, Western Electric Company, Inc.
- 57-673. "Matrix Analysis of Logical Networks," E. J. Schubert, Westinghouse Electric Corp. Re-presented for Discussion.
- 57-677. "Cycle and Delay Time Considerations in a Real-Time Digital Computer," Herbert Freeman, Sperry Gyroscope Co. Re-presented for Discussion.

2:00 p.m.—Transmission & Distribution

- 57-1077. "Suspension Insulator Flashover Under High Impulse Volt- III ages," B. E. Kingsbury, General Electric Company.
- 57-1078. "Impulse Flashover Characteristics of Long Strings of Sus- III pension Insulators," A. F. Rohlfis and H. E. Fiegel, General Electric Co.



Old Orchard Shopping Center

- 57-1079. "Factors Affecting the Lightning Performance of Transmission Lines," J. H. Hagenguth and J. G. Anderson, General Electric Co.
- 57-1080. "A Hypothesis Concerning Lightning Phenomena and Transmission Line Flashover," I. B. Johnson and A. J. Schultz, General Electric Co.

CP57-537. "Calculation of Transmission Line Lightning Voltages By Field Concepts," R. Lundholm, Chalmers Tekniska; R. B. Finn, Jr. and W. S. Price, American Gas and Electric Service Corp.

2:00 p.m.—Power Generation & System Engineering

- CP.* "Determination of Incremental Heat Rate Characteristics From Operating Records," V. R. Peterson and A. H. Willenar, American Gas and Electric Service Corp.
- CP57-1058. "Practical Limitations in the Determination of the Incremental Cost of Fuel," E. K. Corporon, Interchange Power Services, Inc.

CP57-1059. "The Effect of Fuel Heating Value on the Economic Loading of Power Systems," W. H. Guppy, Commonwealth Edison Co.

57-1060. "Incremental Maintenance Costs of Steam-Electric Generating Stations," M. J. Steinberg, Consolidated Edison Company of New York, Inc.

Round Table Discussion—"Application of Incremental Heat Rates to Automatic Load Dispatching."

2:00 p.m.—Communication Switching Systems

- 57-1019. "A Numerical-Graphical Method for Synthesizing Switching Circuits," A. H. Scheinman, Bell Telephone Laboratories, Inc.
- CP57-1020. "Automatic Mobile Telephone System," R. P. Dimmer, Automatic Electric Co.
- CP.* "Mechanization of Toll Switching in Providence, R. I.," C. W. Anderson, New England Telephone and Telegraph Company.
- 57-1095. "The Examination of Electrical Contacts by the Plastic Replica Method," H. W. Hermance and T. F. Egan, Bell Telephone Laboratories.

2:00 p.m.—Mining and Metal Industry

- CP.* "Factors Affecting Rating of Mine Motors," L. L. Lipanye, Reliance Electric and Engineering Co.
- CP.* "Wired Vision and Pushbutton Control," E. A. Berry, Mine Safety Appliances Co.

CP.* "Electrical Problems Involved in Designing Fluorescent Mine Lighting Systems," R. S. James, U.S. Bureau of Mines.

2:00 p.m.—Transformers

- 57-530. "Orthomagnetic Current Transformers for Laboratory and III Factory Testing," L. W. Marks and G. Camilli, General Electric Co. Re-presented for Discussion.
- 57-1040. "A Way to Get Low Sound Levels in Large Power Transformers—Preassembled Enclosures," M. W. Schulz, Jr. and W. J. McNutt, General Electric Company.

CP.* "Standard Basic Impulse Insulation Levels," Report by AIEE Standards Coordinating Committee No. 8.

2:00 p.m.—Wire Communications

- CP57-1070. "Filter Design for Transistorized Carrier," T. Winkler, Stromberg-Carlson Co.
- 57-1017. "Mechanical Features of 561 Subscriber Carrier," J. E. Ross I and O. H. Goldman, Stromberg-Carlson Co.
- 57-1018. "Engineering Features and Field Trial Performance of a I New Subscriber Carrier System," R. L. Layburn, Stromberg-Carlson Company.
- 57-786. "A Review of Telephone Development in Western Europe and in Underdeveloped Areas," G. D. Wallenstein, Lenkurt Electric Company. Re-presented for Discussion.

CP.* "New Design Approaches for Military Carrier Equipment," Neale Zellmer and William Luchier, Lenkurt Electric Company.

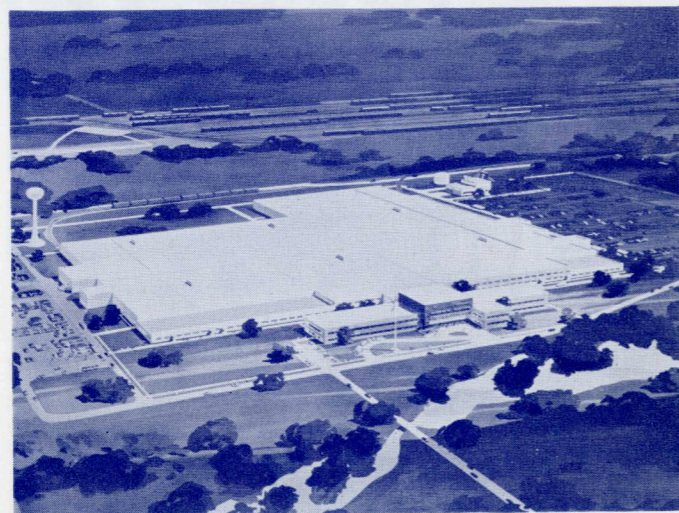
Friday, October 11

9:00 a.m.—Transmission & Distribution

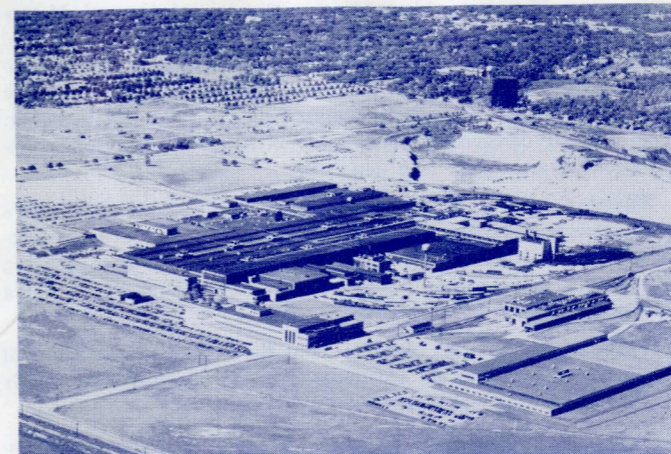
- 57-1081. "Ground Fault Location Indicator," A. C. Lee, Northern States Power Co.
- 57-1082. "Transmission Line Tower Footing Design," L. B. LeVesconte, W. C. Freeman and R. L. Reese, Sargent and Lundy.
- CP57-1083. "Correct Aluminum Connector Designs Eliminate Need For 'Pressure Maintaining Devices'," Meril B. Monashkin, Burndy Corporation.

9:00 a.m.—Electronic Transformers

- 57-1013. "Size Reduction of Airborne Transformers," Ray E. Lee, I Westinghouse Electric Corp.
- 57-1014. "Standards for High Voltage, High Power Rectifier Trans-I formers, James J. Halloran, Electro Engineering Works.



Automatic Electric Company



Electro-Motive Division, General Motors Corporation

CP.* "Bridge Method for Pulse Measurements on Miniature Transformer Core Materials," A. D. Furbee, General Electric Company.

CP57-1015. "Design of Random Noise Transformers," M. P. Vore, Westinghouse Electric Corp.

CP.* "Design Considerations for Dry-Type High-Voltage Power Supplies for Electrostatic Processes," E. C. Hill, General Electric Company.

9:00 a.m.—New Concepts in the Application of Insulation and AIEE No. 1

- CP57-1088. "Revision of Standard No. 1," Report of Coordinating Committee #4 of the Standards Committee, AIEE.
- CP57-1089. "The Guides for Thermal Evaluation of Insulating Materials and Systems, AIEE No. 1D and 1E," Graham Lee Moses, Westinghouse Electric Corp. and J. F. Dexter, Dow Corning Corp.
- CP57-1090. "International Activities in the Temperature Classification of Electrical Insulating Materials," L. J. Berberich, Westinghouse Electric Corp. and K. N. Mathes, General Electric Co.

2:00 p.m.—Radio Communications

- 57-1044. "6000 Megacycle/Sec. Radio Relay System for Broad Band I Long Haul Service in the Bell System," M. B. McDavitt, Bell Telephone Laboratories, Inc.
- CP.* "Radio Multiplex With Circulators," L. B. Johnson, Lenkurt Electric Company.
- CP.* "Single Sideband for Mobile Applications," H. Magnuski, W. Firestone, and R. Richardson, Motorola.
- CP57-1045. "Unattended Recording of VHF Receiver Site Noise," Robert E. Bloor, Ohio Telephone Company.
- CP.* "Evaluation of 900 Megacycles as a Potential Vehicular Communication Band," C. J. Schultz.

2:00 p.m.—Industrial Control

- CP.* "Automation Applied to a Structural Mill," Samuel A. DeCaro, United States Steel Corp.
- CP.* "Factors Influencing Control Desk Design," Donald E. Strom, United States Steel Corp.
- CP.* "Improved Safety in the Control of Stamping Presses," Thomas N. Anderson, Clark Controller Co.
- CP57-1043. "A Photoelectric Device Using a Radioactive Source," Paul Weisman and Stanley L. Ruby, Westinghouse Electric Corp.

2:00 p.m.—Chemical Industry

CP57-1052. "New Developments in Cathodic Protection," B. Husock, Harco Corp.

2:00 p.m.—Insulated Conductors

- 57-1050. "A Study of the Superposition of Heat Fields and the Kennelly Formula As Applied to Underground Cable Systems," Conrad A. Bauer and Robert J. Nease, Commonwealth Edison Co.
- 57-1051. "Cable Tunnel Crossings," E. J. Dawson, Commonwealth Edison Co.; R. W. Gillette, Consolidated Edison Co.; and A. F. Corry, Boston Edison Co.

CONTINUED FROM PAGE 1

LADIES PROGRAM: In addition to the daily 9 a.m. coffee hour during the AIEE Fall General Meeting, the women attending the meeting will be entertained at a variety of events. Following is a list and description of each event:

Sunday: Reception in the Cotillion Room in the Morrison Hotel—4:00 to 6:00 p.m.

Monday: Afternoon, Dessert Card Party in the Ladies Headquarters in the Walnut Room. This is sponsored by the Delta Star Company.

Tuesday: Luncheon in the Pump Room of the Ambassador East Hotel. Dorothy Bond, a syndicated cartoonist, will speak and will also do some caricatures of a few in the audience attending the Luncheon. This Luncheon is being sponsored by the Allis-Chalmers Company.

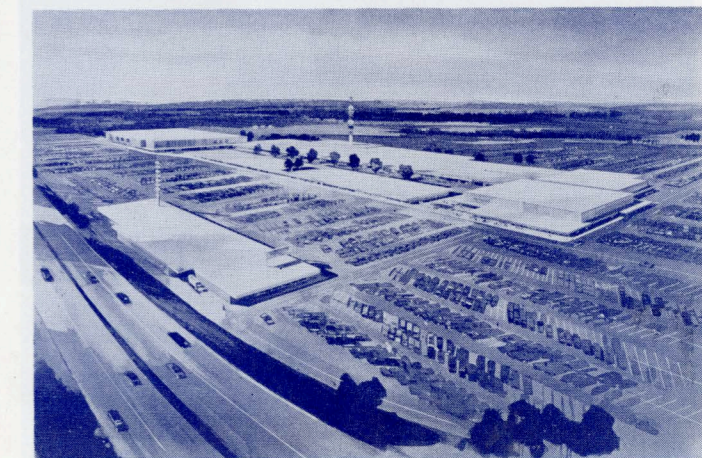
Wednesday: Brunch in the Cub Room of the Morrison Hotel. Betsy Ross, a well known decorator from the John A. Colby Company, will speak to us on Interior Decorating. There will be a \$3.00 charge for the Brunch.

Thursday: Luncheon in the Crystal Room of the Chicago Athletic Club. Sulie Harand, a well known entertainer, will give a musical play. This luncheon is being sponsored by Westinghouse Electric Corporation.

Friday: Our program ends with the morning coffee hour.

RADIO, TELEVISION, AND THEATER TICKETS: Free radio and television tickets for all days of the convention will be available. Tickets should be secured a day in advance and information concerning programs, show times and seating will be available at Headquarters.

Theater tickets and tickets for sporting events will be available only from the hotel ticket broker in the lobby.



Hillside Shopping Center

AIEE FALL GENERAL MEETING

TIPS AND NOTES ON MAKING HOTEL RESERVATIONS

1. Mr. Leo Dolkart is in charge of Hotel Room Reservations and should be contacted in case you need assistance. Address your request to Mr. Leo Dolkart, Hotel Room Reservations Committee, 222 E. Chestnut St., Chicago 11, Illinois.

2. It is suggested that in order to secure good accommodations you mail the reservation and rate card enclosed with this announcement as soon as possible, directly to the Morrison Hotel. If you mislay or lose the card, write to the Reservation Manager, Morrison Hotel, Madison & Clark Sts., Chicago 2, Illinois. Be sure in making your request for reservations to mention AIEE Meeting.

3. The Morrison Hotel has set aside a large number of rooms for this general meeting. If you decide at the last minute to attend, there is still a good chance that rooms will be available at this hotel.

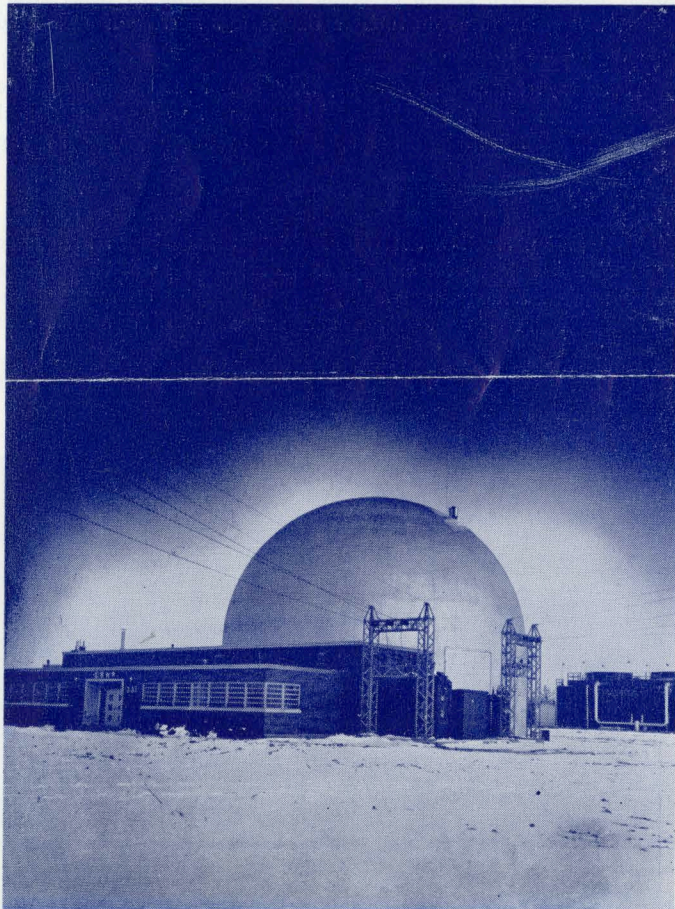
4. Definite rooms will not be reserved until you arrive. If rooms at rates requested are not available, you will be assigned a room at the next higher rate available.

5. Please indicate on your reservation card the time of your arrival. This is necessary if you plan to arrive after 6 p.m. A room will be held for such a member, no matter what time after 6 p.m. he may arrive. Payment for this night will be charged to such a member.

6. If you have to correspond with the hotel regarding room reservations, please mail a copy of your letter to Mr. Dolkart so that matters can be expedited. The Morrison Hotel will acknowledge all room reservations. If you fail to receive an acknowledgement after a reasonable time, write to the Hotel, sending a copy to Mr. Dolkart.

TRIPS DURING AIEE FALL MEETING TO BE INTERESTING AND INFORMATIVE

Eight separate trips have been arranged for AIEE members attending the Fall General Meeting in Chicago.



Nuclear Reactor, Argonne National Laboratory

Tuesday Morning: Electro-Motive Division of General Motors will be host for a tour through their facilities at La Grange, Illinois. In addition to the tour of the manufacturing facilities for diesel locomotives, guests will be given a demonstration of the Electro-Motive mobile Diesel-electric generating units called Electro-Mobile Power. The units are designed to boost power in fringe areas of utility systems and to meet peak load demands.

Tuesday Afternoon: A tour to three of the Chicagoland area's most modern shopping centers will provide a look at the latest electrical service facilities for this type of application. The shopping centers are the Hillside Shopping Center, Old Orchard Shopping Center and Cermak-Plaza Shopping Center.

Tuesday Afternoon: At this time Commonwealth Edison will display how they use an electronic computer in preparing nearly 12,000,000 bills annually—approximately 50,000 each day.

Wednesday Morning: A tour of the Argonne National Laboratories features a look at the Atomic Experimental Boiling Reactor officially dedicated and put "on stream" a few months ago.

Wednesday Afternoon: Will County Generating Station is the newest generating plant of Commonwealth Edison Company and is the subject for the Wednesday afternoon tour. Located on the Chicago Sanitary and Ship Canal, the station's first two—each of 160,000 kw net capability—were placed in operation in 1955. The third, a 260,000 kw net capability, was placed in commercial operation in June of this year. The station can now generate enough electricity to adequately supply a city of 800,000 people.

Thursday Morning: Automatic Electric Company has just moved into its new 1,520,000 square foot manufacturing plant in suburban Northlake and the Thursday morning trip will be made through this plant.

Thursday Afternoon: Thursday afternoon's tour will be to the Chicago plant of the Youngstown Sheet and Tube Company to view the processes of making steel.

Friday Morning: The final tour of the Fall Meeting will be to the new headquarters and broadcasting facilities for the Columbia Broadcasting System in Chicago. The new facilities are in a building which formerly housed an ice skating arena but which was completely transformed for its broadcasting duties.

REGISTRATION: Members can simplify registration procedure by returning the advance perforated registration card promptly. This registration will include the Fall Frolics, Inspection Trips and Ladies Events. This will save time in completing registration details upon arrival at the hotel. The registration fee will be \$5.00 for members and \$8.00 for non-members. No fee will be required of student members and immediate families of members.

COMMITTEE: The members of the 1957 Fall General Meeting Committee are: General Chairman, G. L. Welch; Vice-Chairman, E. H. Finch; Secretary, F. A. Larson; Treasurer, M. J. Adams; Finance & Budget, C. E. Pigue; Fall Frolics, M. J. O'Laughlin; Tickets, D. W. Gilman; General Sessions, D. K. Chinlund; Hospitality, D. H. Beal; Ladies Activities, Mrs. F. W. McCloska; Registration, F. M. Scott; Sale of Papers, F. E. Andrews; Technical Program, C. A. Hatstat; Hotel Arrangements, L. E. Randall; Publicity, J. E. Smith; and Trips and Transportation, J. Agosta.

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