Electrical News

Page 45.

APRIL, 1958

1928 1958

Congratulations . . .

To The

Petroleum Industry Electrical Association

Upon Its

30TH ANNIVERSARY

ELECTRICAL NEWS

Published Monthly by the

Petroleum Industry

Electrical Association

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Tel. 2-8631

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Deadline: 15th of Month Preceding Month of Publication

E. O'DOWD, EDITOR

▲

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General Counsel: Joseph E. Keller.....Washington, D. C.
Dow, Lohnes and Albertson

For your
vital control
communications

DEPEND ON MICROWAVE

Your pipeline operation is as efficient—and profitable—as its control communications system.

That simple fact emphasizes the importance of a properly designed system to insure unfailing reliability and flexibility for future growth.

Westinghouse fills the bill by providing the ultimate in circuit simplicity designed specifically for ease of maintenance and interchangeability. Multiplex panels allow up to 30 crystal-controlled channels capable of carrying up to 15 sub-channels for telegraph, teletype, telemetering or supervisory control. Westinghouse system design incorporates automatic alarm and *100% stand-by* for interruption-

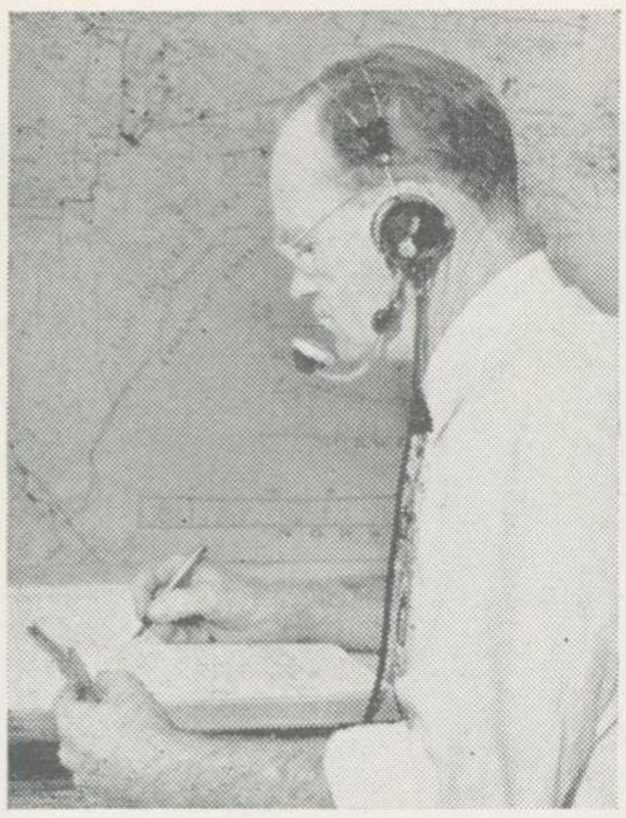
YOU CAN BE SURE...IF IT'S Westinghouse

. . . by Westinghouse

free service. Above all, Microwave gets through, without wires subject to weather or accident damage.

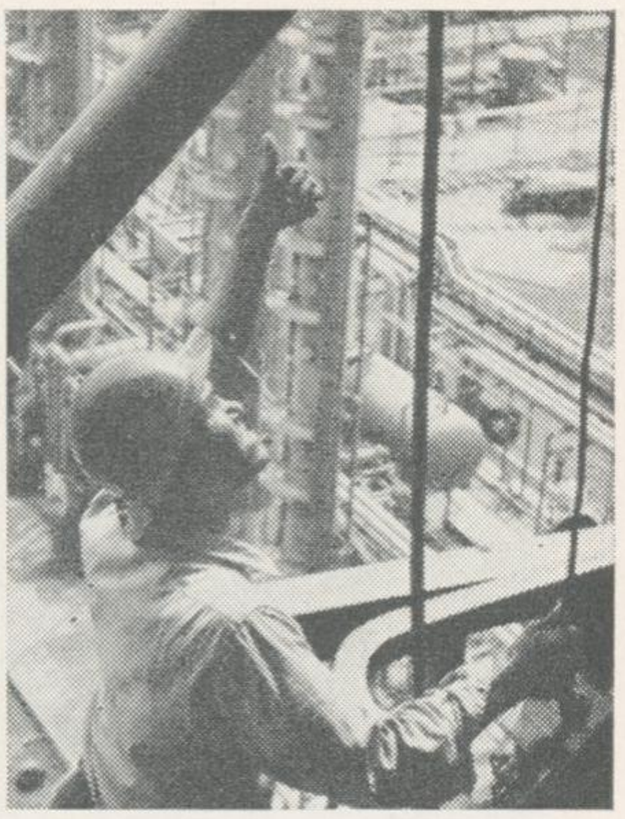
Get all the details—and the economic advantages—from your nearby Westinghouse sales office—or write to Westinghouse Electric Corporation, Carrier-Microwave Department, Box 7425, Halethorpe 27, Maryland.

J-60908-A



Dispatcher

Foreman



Field Worker

the work they DON'T do?

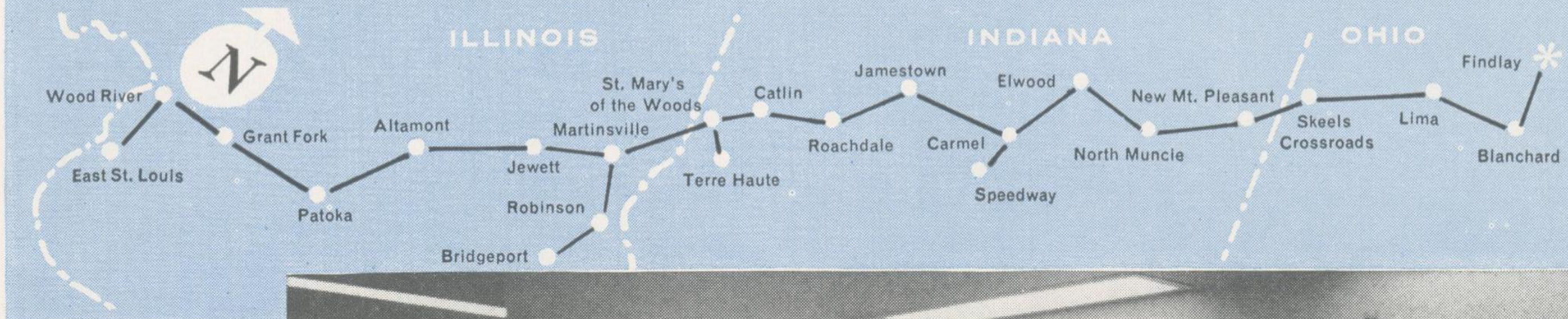
Alert oil management today is *not* asking itself how to cut manhour costs. The BIG problem is how to make every manhour more *effective*, whether it's put in by a vice president or a laborer. This means transmitting executive decisions to the field faster, sending dispatcher's instructions without delay, providing quick contact with foremen and workers in the remotest part of your oilfield, refinery, or pipeline system. In short, cutting the walking, waiting, and unnecessary traveling—and *getting things done!*

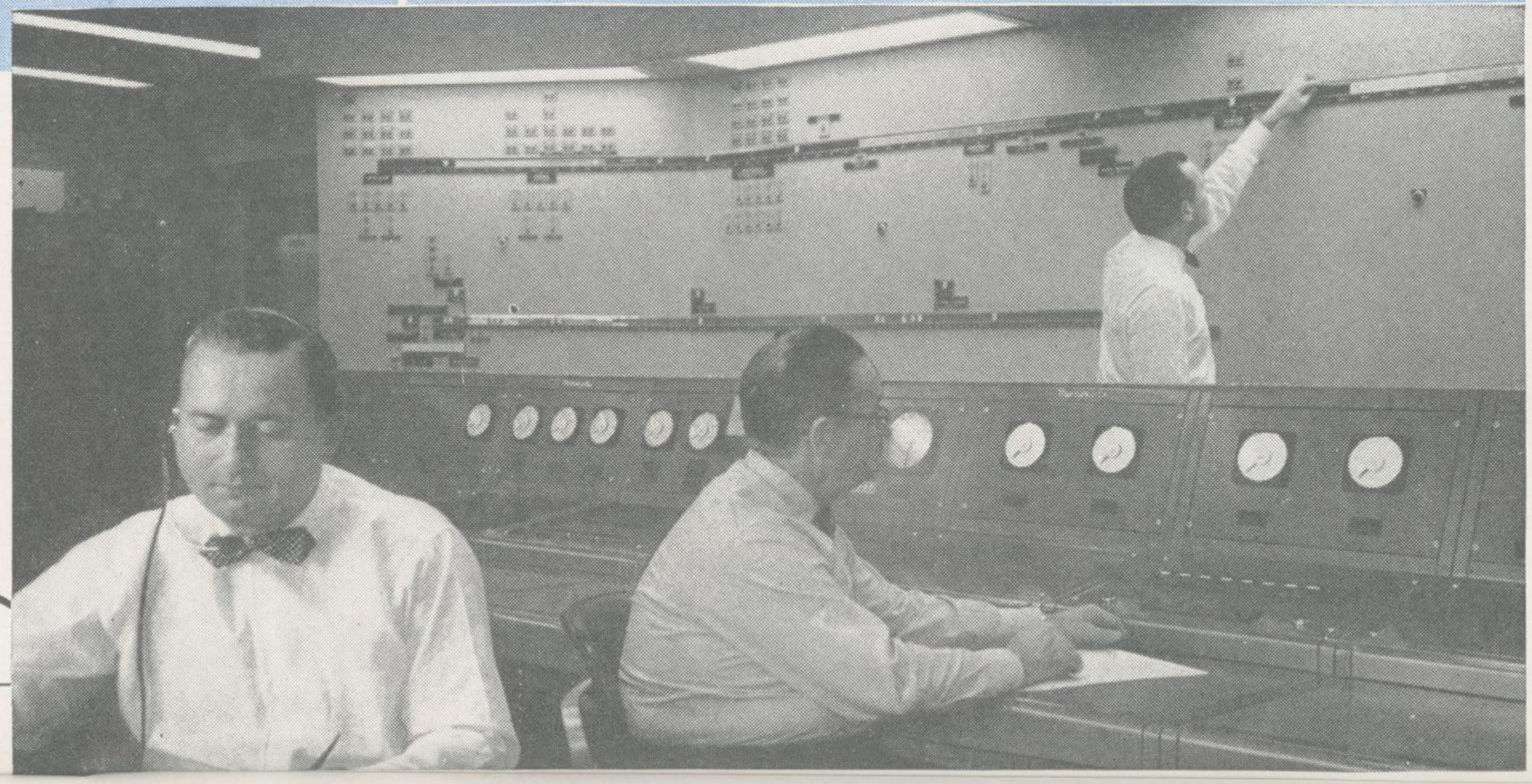
P-A-X does all this for you. It's an automatic telephone system that connects you with any point in your organization instantly, at the turn of a dial. You own and control P-A-X yourself; you terminate your microwave channels, carrier circuits, and physical lines on it as you wish.

Many oilmen use P-A-X. They're so enthusiastic about it, they've given us case studies demonstrating its striking advantages. Drop us a note today—or call our representative for details.

OHIO OIL replaces wire lines with
MOTOROLA MICROWAVE

...FOR NEW EFFICIENCY IN 3 STATE, 460 MILE PIPELINE OPERATION





* Master Control Console Office, Findlay, Ohio

HERE'S HOW MOTOROLA MICROWAVE IS WORKING FOR OHIO OIL COMPANY . . .

Check the applications that could serve your operations.

- ☐ **VOICE CHANNELS**—24 duplex, 5 simplex party lines
- ☐ **REMOTE CONTROL** of two automatic pumping stations
- ☐ **TELETYPEWRITER**—3 circuits, 10 stations
- ☐ **SELECTIVE TELEMETERING**—Channels return 5 types of information
  1. Tank Gauging—Liquid Level
  2. Pressure—Suction and Discharge
  3. Specific Gravity—Pipeline Contents
  4. Pipeline Flow Meter Readings
  5. Temperature Readings—Pipeline Contents
- ☐ **VHF RADIO**—3 control points operate 8 base stations

Into this huge master console—the "nerve center" for Ohio Oil's "crude" and "product" pipe line operation—is fed control and supervisory data gathered throughout 23 stations along the microwave system. This data is transferred to a "batchboard" which provides an overall operational picture. From the console, the operator can monitor and control valves and pumps at crude oil pumping stations, eliminating the need for 24-hour attendance at these points.

Along the entire system, telephone, teletypewriter, telemeter and remote control circuits provide dependable communications, free of weather damage or interference. VHF radio base stations, at several microwave repeater stations, supply system-wide coverage to and from vehicles equipped with Motorola 2-way radio.

"It takes efficient, reliable communications facilities to keep oil moving along our 'Big Inch' pipe line 24 hours a day," says Mr. Ralph M. Slough, manager of pipe line communications, Ohio Oil Co., "and Motorola Microwave gives us a better and more efficient operation than we obtained with our previous wire line arrangement."

For a hundred miles or a thousand, Motorola Microwave provides dependable communications at lower overall costs—let us prove that Motorola Microwave can do a better job for you, too!

MOTOROLA MICROWAVE

MOTOROLA COMMUNICATIONS & ELECTRONICS, INC. • A SUBSIDIARY OF MOTOROLA, INC. • 1400 N. CICERO, CHICAGO 51, ILL.

Control Corporation

The nameplate of Quality

New Applications and Capabilities of TM-16 Digital Telemetering System

Working with accurate figures means a lot when you are responsible for the movement of thousands of dollars worth of "cargo" flowing through your pipelines.

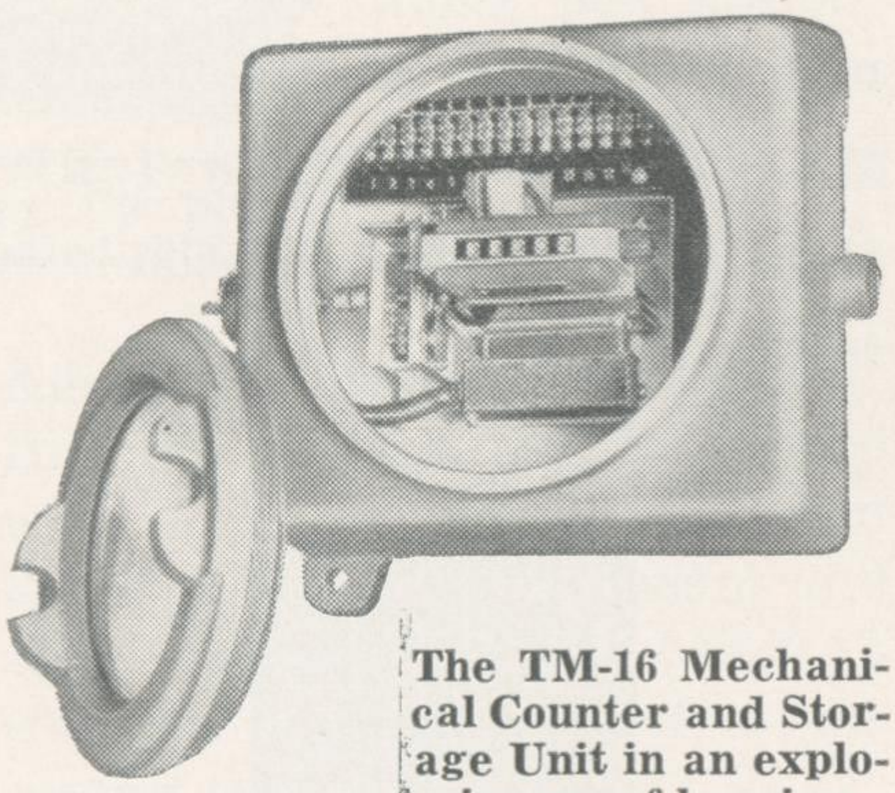
The Basic TM-16 has many applications:

- As a standard counter and storage unit which gathers information and transmits information only when called for.
- As a low-cost, selective calling system. This comparatively new application has unlimited possibilities.
- The combination of these two systems seems as broad as the ingenuity and the fertile imagination of the pipeline engineers.

TM-16 eliminates the susceptibility to errors which may occur when using pulse telemetering to transmit numerical values.

TM-16 automatically "checks itself" on each digit and every reading. It eliminates the need for sending a man out regularly to read the remote flowmeter and phone in the reading — just to check the actual reading against that obtained by ordinary "continuously recording" telemetering systems.

TM-16 is positive in action . . . the mechanical counter and storage unit is powered by a flexible shaft which is directly coupled to the recording flowmeter. Like an adding machine, TM-16 keeps on adding until a re-set signal is received, or it is manually reset to zero.



The TM-16 Mechanical Counter and Storage Unit in an explosion-proof housing.

TM-16 Mechanical Counter does not cancel information during or after the transmission of a reading. Without interruption, it continues to add to the total count, thus at any time you can call for a new, up-to-the-minute reading.

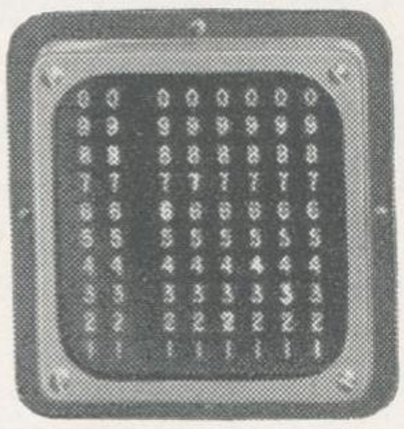
Fast, Foolproof Telemetering . . . The Electrical Scanning unit converts the reading to a ten-pulse group which corresponds to each digit. With a five digit figure, the entire signal is transmitted within 7 seconds! (If your operation requires less than 6 readings per hour, the transmitting time of all six readings takes a scant 60 seconds. Thus the other 59 minutes of every hour is made available on your communications channel for other needs.)

TM-16 ELECTRICAL Counter and Storage Unit. This unit was originally designed for use with contact-making meters such as are used by electric utilities, etc. There are many specific pipeline applications where this unit will do special jobs unique to pipeline operation.

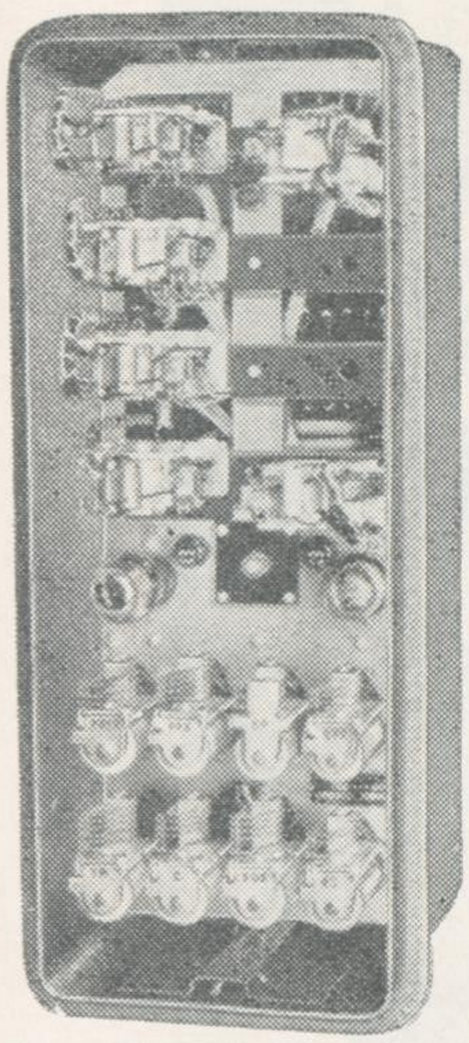
Inserting Meter Constants. Now TM-16 is available to insert any constant up to 5 digits at each meter contact closure. The constant may be changed easily, without even taking the cover off the storage unit, by simply changing the jumpers on the terminals provided. For operators who wish to change the constant by remote control, this can easily be done by using TM-16 as a Selective Calling System.

Readings at the same time instant. This is another feature of the TM-16 Electrical Storage Unit. It makes possible accurate, system-wide readings, all based on the same time instant. Auxiliary storage units keep the count while the main units are locked up, waiting for their "reporting-in" sequence.

TM-16 for SELECTIVE CALLING. This is a new application for TM-16 and has unlimited possibilities for pipeline applications. It may be used for calling for telemeter readings (of TM-16 or any other meter recorded telemetering) or to initiate remote operations which do not require a return indication . , . or to remotely set up a meter constant . . . to reset storage units to zero . . . or even to set up a count on a remote receiver so as to automatically cause an operation (valve closing, etc.) when the count is reached.



The TM-16 Digital Display Unit. If desired, the information can be fed directly to an automatic printer, typewriter, paper tape printing, adding machine printer, etc., for permanent recording.



The TM-16 Receiver showing the plug-in mounted relays.

With a 2-digit Selective Calling System, TM-16 will operate 10 stations with 10 selections per station or 20 stations with 5 selections per station . . . a total of 100 selections but not to exceed 10 selections per station. A 3-digit system would provide up to 1000 selections.

Automatic Custody Transfer

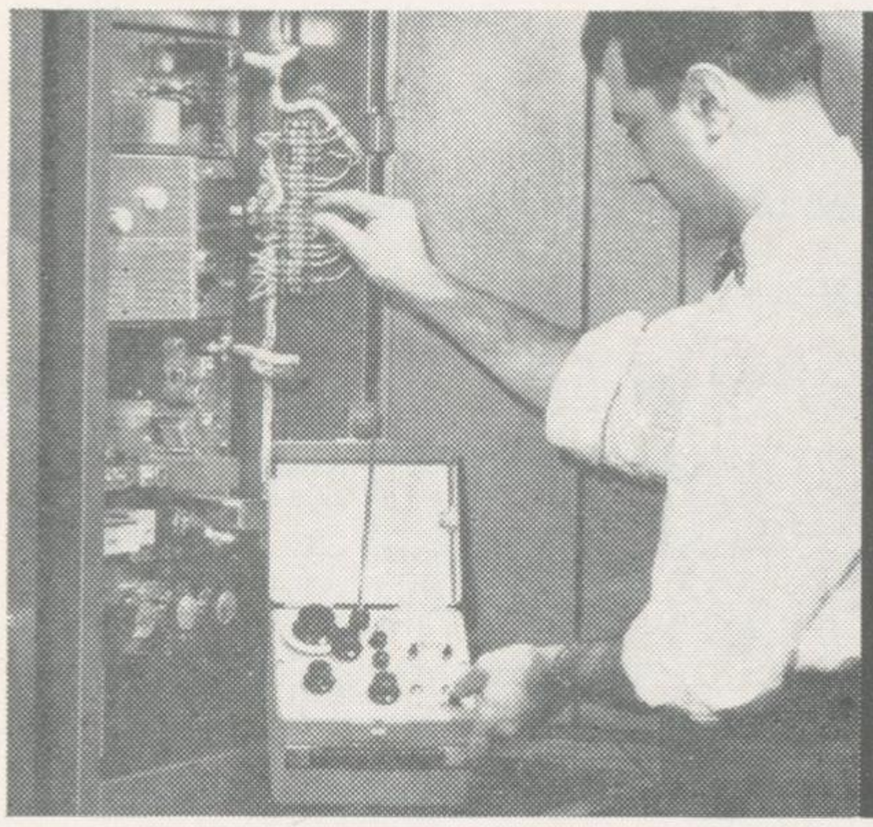
Here we can use the TM-16 two ways . . . First TM-16 is used in the regular manner to count and store the information, and to transmit the information to the control station.

A second receiver located at the valve or pumping station is "set-up" by the TM-16 transmitter located at the control station. (Here the TM-16 is used as a Selective Calling System.)

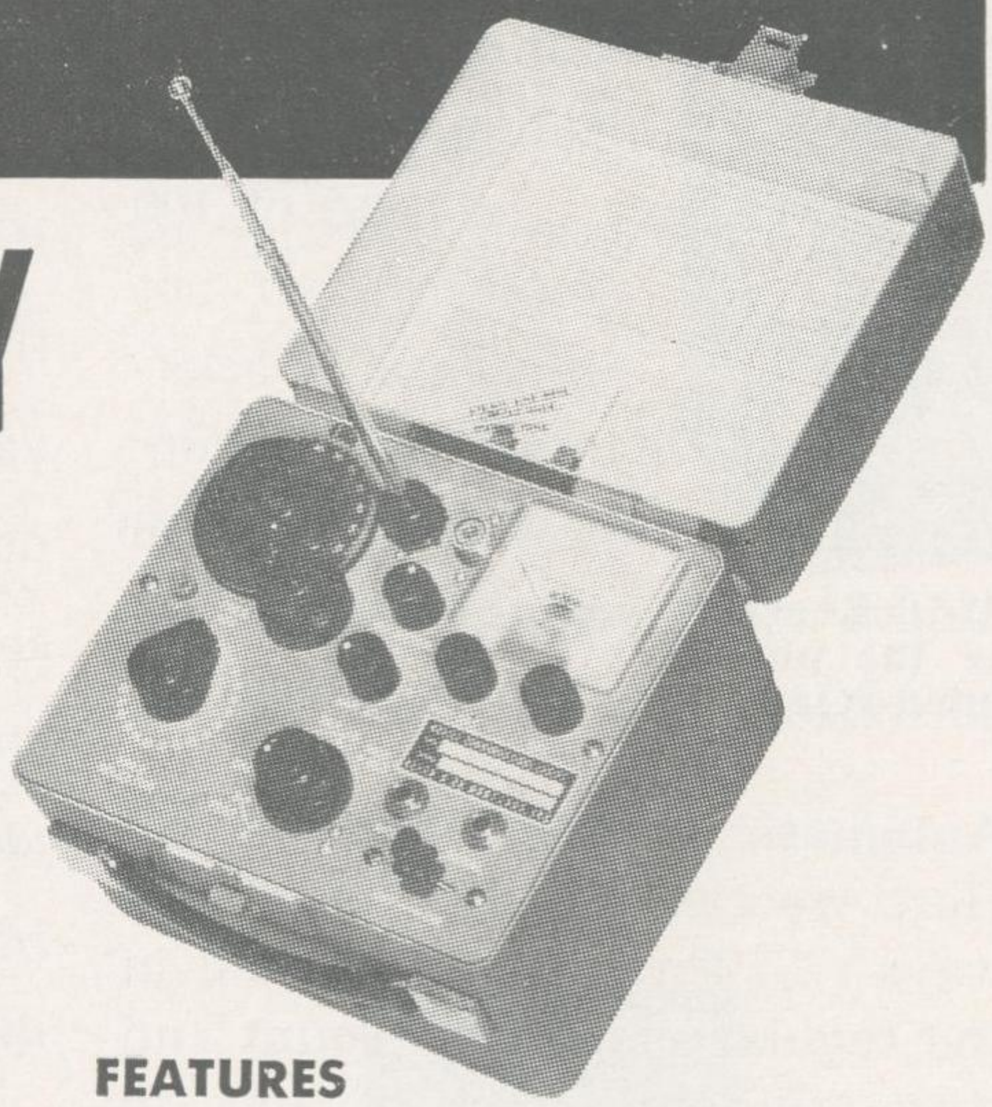
Control relays are connected to the second receiver so that when the pre-set figure is reached, the valve is closed or the pump shut down. Thus by using a TM-16 for selective calling we initiate valve closing at any pre-determined value and the other TM-16 Counting and Storage—Transmit system reports back the actual count with the absolute accuracy required for billing.

Specialized Leadership in Supervisory Control and Telemetering Equipment

verify transmitter frequency–
any channel, (25 MC to 470 MC)
EASILY, QUICKLY, POSITIVELY!



DU MONT®
TYPE 5890-A/B 24-CHANNEL TRANSISTORIZED MOBILE RADIO



FREQUENCY METER

A Du Mont exclusive! The Du Mont Frequency Meter is a compact, accurate piece of test equipment that every user of mobile radio needs. It covers any rf channel between 25 MC and 470 MC. The Frequency Meter permits a direct comparison of transmitter frequency on any one of 20 rf channels. Error between transmitter and assigned frequency is indicated on easy-to-read meter, or monitored aurally through headphones. The Frequency Meter also provides crystal-controlled rf and if frequencies for precise receiver alignment, and a 1 kc audio signal which permits accurate setting of transmitter deviation limiter.

FEATURES

- 24 rf/if channels and 1 kc audio signal.
- Guaranteed accuracy:
  Type 5890-A ± .0005% (+20°C to +40°C)
  Type 5890-B ± .00025% (+20°C to +50°C)
- Transistorized. Battery operated.
- Modulation deviation check.
- May be used as signal generator for receiver checking, including up to 4 if frequencies.
- Checks adjacent- or split-channel equipment.
- Measures transmitter relative field strength.
- Built-in counter calibrating facilities.
- Built-in battery checker

Write For Complete Details...

MOBILE COMMUNICATIONS DEPARTMENT
ALLEN B. DU MONT LABORATORIES, INC.
760 Bloomfield Ave., Clifton, N. J.

Petroleum Industry Electrical News

Volume 26 Shreveport, La. Number 10

PIEA Passes Its 30th Milestone

Thirty years ago fifteen men representing fourteen companies met in Fort Worth, Texas, on March 21, 1928, and organized a body to be known as the Petroleum Industry Electrical Association.

The object of the Association is the study of and interchange of knowledge and ideas relative to the oil and gas industries with respect to the construction, maintenance, and operation of electrical power and communicating systems and other related operations employed by its various members as to the respective companies.

Membership of the Association is made up from those companies or corporations in the petroleum industry having an individual in charge of electrical or communication systems of the respective companies or corporations. Today, there are 74 PIEA member companies.

While the PIEA has enjoyed a steady growth, it has been able to maintain a favorable climate for its members to meet informally, discuss and solve many communication and electrical problems facing the growing petroleum industry.

In 1938 the supply men serving this segment of the petroleum industry formed the Petroleum Electric Supply Association, a parallel organization to work with PIEA. There were 35 booths reserved for the first exhibition in 1938. At the 1958 exhibition there will be 133 booths representing the best display of this type in the nation.

The same fundamentals which fostered the PIEA organization in 1928 will continue to contribute to the growth of both PIEA and PESA: that of providing the petroleum industry with the ultimate in methods and equipment to do the job in the best way.

PAST PRESIDENTS PETROLEUM INDUSTRY ELECTRICAL ASSOCIATION

(Listed in the order they held office)

T. J. McMahon*
F. S. Leonard*
A. J. Balcom*
R. M. Bayless
C. O. Shirley
M. Chambers
J. W. Flint
F. P. O'Connor
P. F. Davis
E. M. Smith
D. W. Sims
O. V. Summers
C. O. Diller
L. G. Wainman
F. W. Littell
R. C. Appling
M. C. Callahan
J. F. Collerain
D. H. Levy
R. M. Slough
V. J. Sittel
A. L. Stegner
H. G. Pegues
W. E. Church
J. A. Polhemus, Jr.
Hezzie Clark
H. A. Rhodes

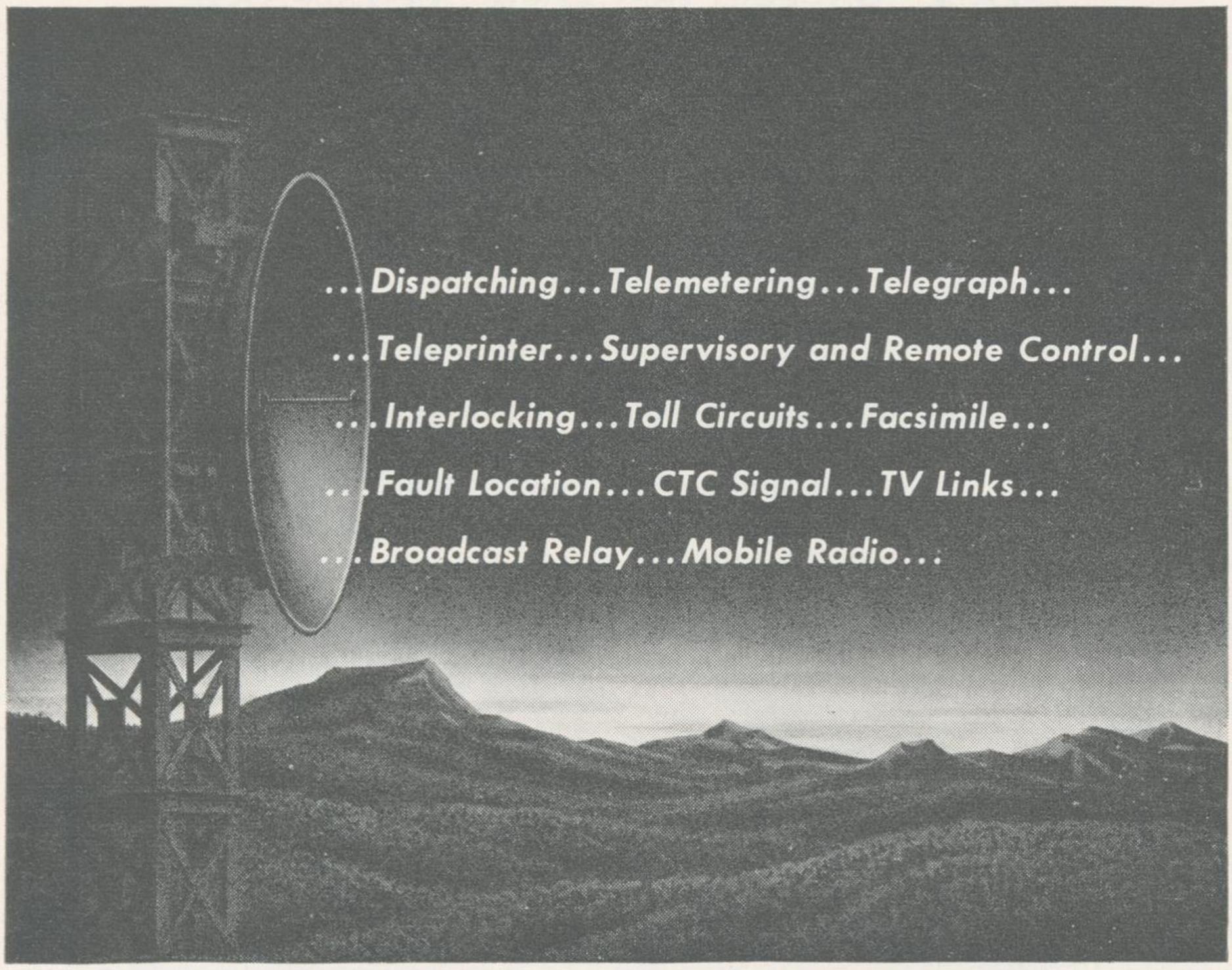
*Deceased

HONORARY MEMBERS OF PIEA

H. B. Allen*
R. C. Appling
F. C. Baker
A. J. Balcom*
R. M. Bayless
Harry D. Bennett*
J. H. Borchers*
H. E. Browne*
W. T. Bulla
M. Chambers
W. E. Church
John Darr*
P. F. Davis
J. D. Durkee
W. S. Dyer*
Avery F. Harrel
T. M. Hart*
Harry Jones*
F. S. Leonard*
W. F. Littell
T. J. McMahon*
G. O. Miller
H. C. Miller*
F. P. O'Connor
Grover Reed*
C. C. Sampson*
W. B. Shakely
C. O. Shirley
D. W. Sims
E. M. Smith
O. V. Summers
C. W. Turner*
H. H. Watson*
D. R. Welch*

*Deceased

FEDERAL MICROWAVE—"*CERTIFIED BY A WORLD OF RESEARCH*"



Peak performance for your communication needs

Whatever the voice, message, and signal circuits your industry needs for the transmission of its operating intelligence, a *Federal* multichannel microwave system can provide them ... completely ... continuously ... simultaneously ... and with topmost dependability.

Federal Microwave has a built-in record of quality and performance that is unique in the field ... a record of progress that reaches back to the birth of the art ... to the world's *first* commercial microwave link ... inaugurated decades ago by companies of International Telephone and Telegraph Corporation.

Today, the work of extending the applications and efficiency of IT&T's preeminent microwave techniques goes on endlessly ... in laboratories and factories in the United States and nine foreign lands. An important contributor to this continuing program is *Federal's* own forty-odd years in electronics.

It is this background... this *pioneering* spirit ... that keeps *Federal* Microwave outstanding for its *peak* performance ... distinguishes it as the microwave system that's *"Certified by a World of Research!"*

Federal

FEDERAL TELEPHONE & RADIO FTR

A DIVISION OF IT&T

Federal Telephone and Radio Company

A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION

100 KINGSLAND ROAD • CLIFTON, NEW JERSEY

Program

Petroleum Industry Electrical Association and Petroleum Electric Supply Association

30th Annual Conference and Exhibition
Adolphus and Baker Hotels—April 29-30, May 1, 1958
Dallas, Texas

MONDAY, APRIL 28, 1958

1:00 P. M.—Registration Desk Opens—Adolphus Hotel
5:00 P. M.—PIEA Directors Meeting—Headquarters Suite
5:00 P. M.—PESA Directors Meeting—Headquarters Suite
7:00 P. M.—Joint PIEA-PESA Directors Meeting—Parlor "D"—Adolphus Hotel
6:00-
12:00 P.M.—Lounge—Cactus Room, Adolphus Hotel

TUESDAY, APRIL 29, 1958

8:00 A.M.—Exhibits Open—Adolphus Hotel
8:30 A.M.—Registration—Adolphus Hotel
10:00 A.M.—Opening Ceremonies—Roof Garden—Adolphus Hotel

1. Invocation, Rev. Thom Shipp, Pastor Lovers Lane Methodist Church
2. Welcome Address, Hon. Robert L. Thornton, Mayor of Dallas
3. Greetings from Petroleum Industry
   Mr. L. A. Sunkel, Vice-President
   The Atlantic Refining Company
   Dallas, Texas
4. Opening Remarks—President PIEA, John O. Holder
5. Opening Remarks—President PESA, John E. Metzenthin
6. General Chairman—Thos. B. Kelley, PIEA
7. General Chairman—Theil W. Sharpe, PESA
8. Announcements
9. Memorials—Jack Collerain

11:00 A.M.—Closed Business Meetings
PIEA—Roof Garden, Adolphus Hotel
PESA—Danish Room, Adolphus Hotel
12:00 —Noon Recess

Afternoon Technical Session
Roof Garden—Adolphus Hotel

E. B. Dunn, Presiding — Ralph Echols, Assisting

2:00 P. M.—"Automation in the Petroleum Industry"
Haddon Wilson
Radio Corporation of America
Camden, New Jersey

2:30 P. M.—Automation Symposium
F. Vinton Long, Moderator
Texas Eastern Transmission Corporation
Shreveport, Louisiana

R. W. Smith
Gulf Interstate Gas Company
Houston, Texas

J. R. Hoffman
El Paso Natural Gas Company
El Paso, Texas

Louis G. Maier
Plantation Pipe Line Company
Bremen, Georgia

Fred S. Jones
Platte Pipe Line Company
Kansas City, Missouri

W. E. Matthews
Southern Natural Gas Company
Birmingham, Alabama

Ralph J. Osborn
Sinclair Pipe Line Company
Independence, Kansas

J. Gus Lewis
Service Pipeline Company
Tulsa, Oklahoma

Don L. Hope
Great Lakes Pipe Line Company
Kansas City, Missouri

4:30 P. M.—Adjourn to Exhibits

6:00-
7:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

7:00 P. M.—Buffet Supper and Entertainment—Crystal Ballroom—Baker Hotel

9:30-
12:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

WEDNESDAY, APRIL 30, 1958

Morning Technical Session
Roof Garden—Adolphus Hotel

R. S. Caplan, Presiding — W. M. Sorensen, Assisting

8:00 A.M.—Exhibits Open

9:00 A.M.—"Report From Washington"
Joseph E. Keller, Special Representative
API, NPRFCA, Counsel for PIEA
Washington, D. C.

9:45 A.M.—"Field Testing and Maintenance of Switchgear Devices"
R. H. Davidson, Service Engineer
Nelson Electric Manufacturing Company
Tulsa, Oklahoma

10:15 A.M.—"Motor Protection—Electrical and Mechanical"
J. K. Howell
Westinghouse Electric Corporation
St. Louis, Missouri
10:45 A.M.—Adjourn to Exhibits

Afternoon Technical Session
Roof Garden—Adolphus Hotel

C. E. Upson, Presiding L. I. Duthie, Assisting

2:00 P. M.—"Message From F. C. C."
Warren Baker, General Council
Federal Communications Commission
Washington, D. C.
2:30 P. M.—"The G-Line R. F. Transmission Line"
L. A. Bondon, President
Prodelin, Inc.
Kearny, New Jersey
3:00 P. M.—"Unusual Features of Two New Microwave Systems"
E. B. Dunn
Atlantic Pipe Line Company
Philadelphia, Pennsylvania
Frank Geisel
Atlantic Pipe Line Company
Dallas, Texas
3:30 P. M.—Adjourn to Exhibits
6:00-
7:00 P. M.—Lounge—Cactus Room—Adolphus Hotel
7:00 P. M.—Banquet—Terrace Room—Baker Hotel
9:00-
12:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

THURSDAY, MAY 1, 1958
Morning Technical Session
Roof Garden—Adolphus Hotel

E. W. Messinger, Presiding Russell Prack, Assisting

8:00 A.M.—Exhibits Open
9:00 A.M.—Energy From the Wind
Dr. U. Hutter
Stuttgart, Germany
Sponsored By: Automatic Power, Inc.
Houston, Texas
9:30 A.M.—Corrosion Symposium and Film
Pearce Butterfield, Moderator
World Supply Company
Houston, Texas
11:30 A.M.—Noon Recess

Afternoon Technical Session
Roof Garden—Adolphus Hotel

C. H. Burgess, Presiding P. S. Phillips, Assisting

1:30 P. M.—Standardization of Transformers
Sherman A. Creson
General Electric Company
Rome, Georgia

2:00 P. M.—Safety Demonstration
Holly P. Bradley
Service Pipeline Company
Tulsa, Oklahoma
2:45 P. M.—Closed Business Meeting
PIEA—Roof Garden, Adolphus Hotel
PESA—Danish Room, Adolphus Hotel
5:00 P. M.—New Directors Meeting
PIEA—Headquarters Suite
6:00 P. M.—Joint PIEA-PESA New Directors Meeting
PESA Headquarters Suite
6:00-
12:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

PROGRAM
Petroleum Electric Supply Association
APRIL 28, 1958

1:00 P. M.—Pre-Conference Registration
5:00 P. M.—Directors Meeting—Headquarters Suite, Adolphus Hotel
7:00 P. M.—Joint PIEA-PESA Directors Meeting and Dinner—Parlor "D," Adolphus Hotel
6:00-
12:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

TUESDAY, APRIL 29, 1958

8:30-
5:00 P. M.—Registration
11:00 A.M.—Closed Business Meeting—Danish Room—Adolphus
Roll Call
Report of President
Report of Secretary-Treasurer
Report of Committees
Memorials
Appointment of Committees
General Business
Announcements
6:00-
7:00 P. M.—Lounge—Danish Room—Adolphus Hotel
7:00 P. M.—Buffet—Crystal Ballroom—Baker Hotel
9:30-
12:00 P. M.—Lounge—Danish Room—Adolphus Hotel

WEDNESDAY, APRIL 30, 1958

8:30 A.M.-
5:00 P. M.—Registration
6:00-
7:00 P. M.—Lounge—Cactus Room—Adolphus Hotel
7:00 P. M.—Banquet, Terrace Room, Baker Hotel
9:00-
12:00 P. M.—Lounge—Cactus Room,—Adolphus Hotel

THURSDAY, MAY 1, 1958

2:45 P. M.—Closed Business Meeting—Danish Room—Adolphus Hotel
Roll Call
Report of Secretary-Treasurer
Report of Nominating Committee
Election and Installation of Officers
Unfinished Business

5:00 P. M.—New Directors Meeting—Headquarters Suite—Adolphus Hotel

6:00 P. M.—Joint PIEA-PESA New Directors Meeting—PESA Headquarters Suite—Adolphus Hotel

6:00-
12:00 P. M.—Lounge—Cactus Room—Adolphus Hotel

Petroleum Industry Electrical Association

1957-1958 OFFICERS

John O. Holder ..... President
E. H. Wilder ..... Vice President
E. B. Dunn ..... Secretary-Treasurer

DIRECTORS

H. A. Rhodes, Chairman

John O. Holder
E. H. Wilder
E. B. Dunn
Thos. B. Kelley
D. R. Wofford
A. E. DeMattei

1958 CONFERENCE COMMITTEES

Thos. B. Kelley ..... General Chairman
J. R. Ashley ..... Arrangements
Frank Geisel ..... Entertainment
Clarence Diller ..... Publicity
Frank Clymer ..... Registration
C. W. Evans ..... Reservations
Carl A. Compton ..... Program

Breakdown of PIEA Membership By States

California	8	Michigan	2
Colorado	2	Missouri	3
Georgia	1	Nebraska	1
Illinois	3	New York	1
Kansas	1	Ohio	4
Kentucky	1	Oklahoma	11
Louisiana	10	Pennsylvania	2
Maine	1	Texas	21
		West Virginia	1
		Canada	1
		TOTAL: April 1, 1958	74

Petroleum Electric Supply Association

1957-1958 OFFICERS

John E. Metzenthin . . . . . President
Douglas F. Ball . . . . . Vice President
P. S. King . . . . . Executive Secretary and Treasurer

DIRECTORS

R. J. Smith, Chairman

John E. Metzenthin
Douglas F. Ball
P. S. King
Theil W. Sharpe
C. A. Gunn
H. C. Shelton
Pat Wilson
Ralph T. Asbury

Claude R. Miller, Counselor

1958 CONFERENCE COMMITTEE

Theil W. Sharpe, General Chairman

Registration:
R. T. Shiels, Jr., Chairman
Jack Clack, Co-Chairman
N. R. Ogden
Walter S. Terrell, Jr.
Jack Morgan
Dean Roberts
Thomas R. Gale, Co-Chairman
Louis Streeter
Chris Borkholm
William B. Pitts
Wallace H. Johnson,
Co-Chairman
S. E. Johnson
J. J. Cupples
J. J. Mooney

Entertainment:
Wynne Snoots, Chairman; Thos. A. Farrell, Jr., Co-Chairman

Exhibits and Prizes:
W .W. Weedfall, Chairman

Publicity:
Thomas A. Farrell, Jr., Chairman

Lounge Room:
H. L. Housley, Chairman
A. W. Harder, Co-Chairman
Dale Eckeberger
C. A. Gunn
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W. A. McCarter
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Douglas F. Ball, Co-Chairman
Ralph T. Asbury
W. T. Thompson
F. W. Littell
John Gunther
John R. Ganther
John D. Trilsch

Reception:
Pat Wilson, Chairman; Wynne Snoots, Co-Chairman

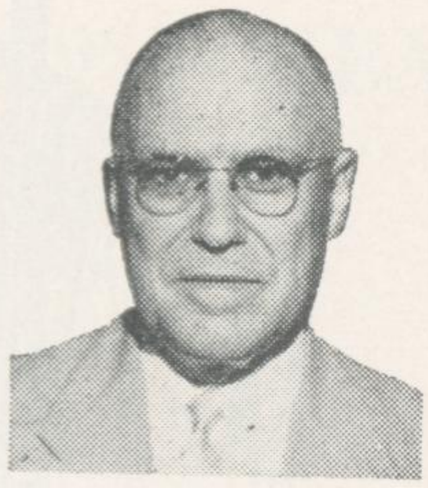
Memorials:
John D. Trilsch, Chairman

PEPA TO HOLD 30TH ANNUAL MEETING

The Petroleum Electric Power Association is also celebrating its 30th anniversary this year at its annual meeting on June 2, 3, and 4 at the Texas Hotel, Fort Worth, Texas.

J. O. Holder

PIEA President
Service Pipe Line Co.
Tulsa, Oklahoma



E. H. Wilder

PIEA Vice President
Sun Oil Company
Beaumont, Texas

E. B. Dunn

PIEA Secretary-Treasurer
Atlantic Pipe Line Company
Philadelphia, Pa.

John E. Metzenthin

PESA President
Crouse-Hinds Company
Dallas, Texas

Douglas F. Ball

PESA Vice President
Motorola C. & E., Inc.
Houston, Texas

P. S. King

PESA Executive
Secretary-Treasurer
Westinghouse Electric Corp.
Dallas, Texas

1957-1958 PIEA Committees

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Clifford G. Pool, Vice Chairman
J. D. McCullough
E. W. Messinger
E. B. Dunn
Edward L. Hathaway
J. W. LaBoon
J. A. Fowler

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M. C. Callahan, Vice Chairman
C. W. Evans
L. E. Cook
J. W. Flint
C. O. Diller
C. Harvey
J. R. Ashley

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P. R. Butterfield, Chairman
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M. S. Collett, Vice Chairman
C. E. Upson
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E. L. McNeel
D. E. York
J. O. Mostrom
Delbert R. Wofford
William P. Heyse
Fred Armstrong
F. S. Bird
Marion Franks
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R. L. Ransome

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Representative to A. P. I.
National Electric Code
Coordinating Committee

Hezzie Clark, Chairman

1959 Conference, Galveston, Texas
April 7-9, 1959
General Chairman:
Clifton D. Campbell
Humble Pipe Line Co.
P. O. Box 2220
Houston, Texas

From PIEA President Holder

The thirtieth annual conference of the Petroleum Industry Electrical Association and Petroleum Electrical Supply Association will soon be under way.

Our congratulations to Mr. Tom Kelley and his able assistants; to John Metzenthin, Theil Sharpe, and their assistants, for the wonderful pre-convention job; and to Eve O'Dowd for her timely reminders.

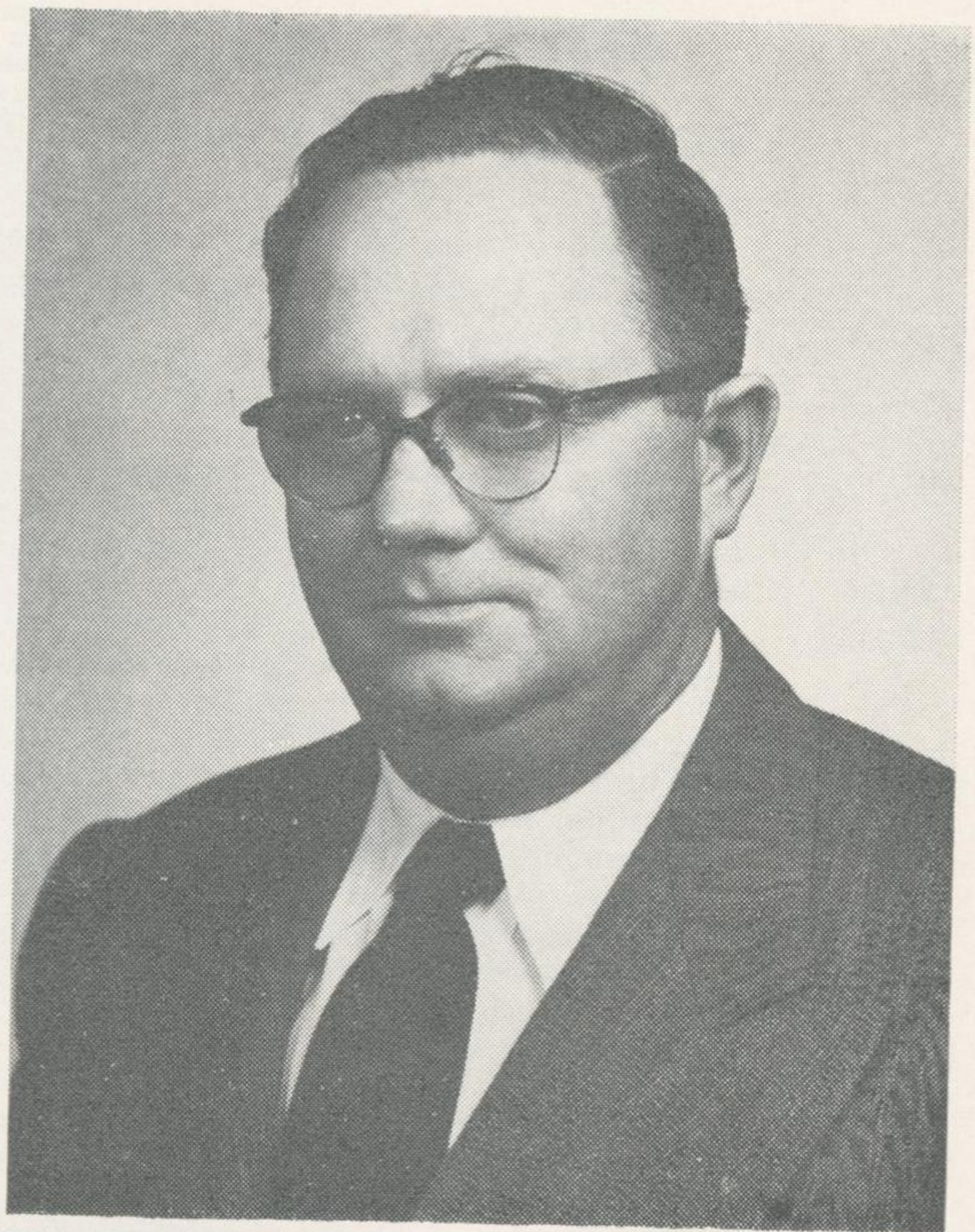
All booth space has been sold out; the program is complete; and we expect to have an interesting convention.

Wednesday, April 30, has been designated Visitors' Day for exhibits by the Petroleum Electrical Supply Association.

Invitations have been extended to engineering classes from several colleges and to PESA customers to take advantage of Visitors' Day and view the exhibits.

Death Claims Mrs. O. V. Summers

Sincere sympathy by all members of PIEA and PESA is expressed to O. V. Summers upon the death of his wife who passed away on April 5, 1958.

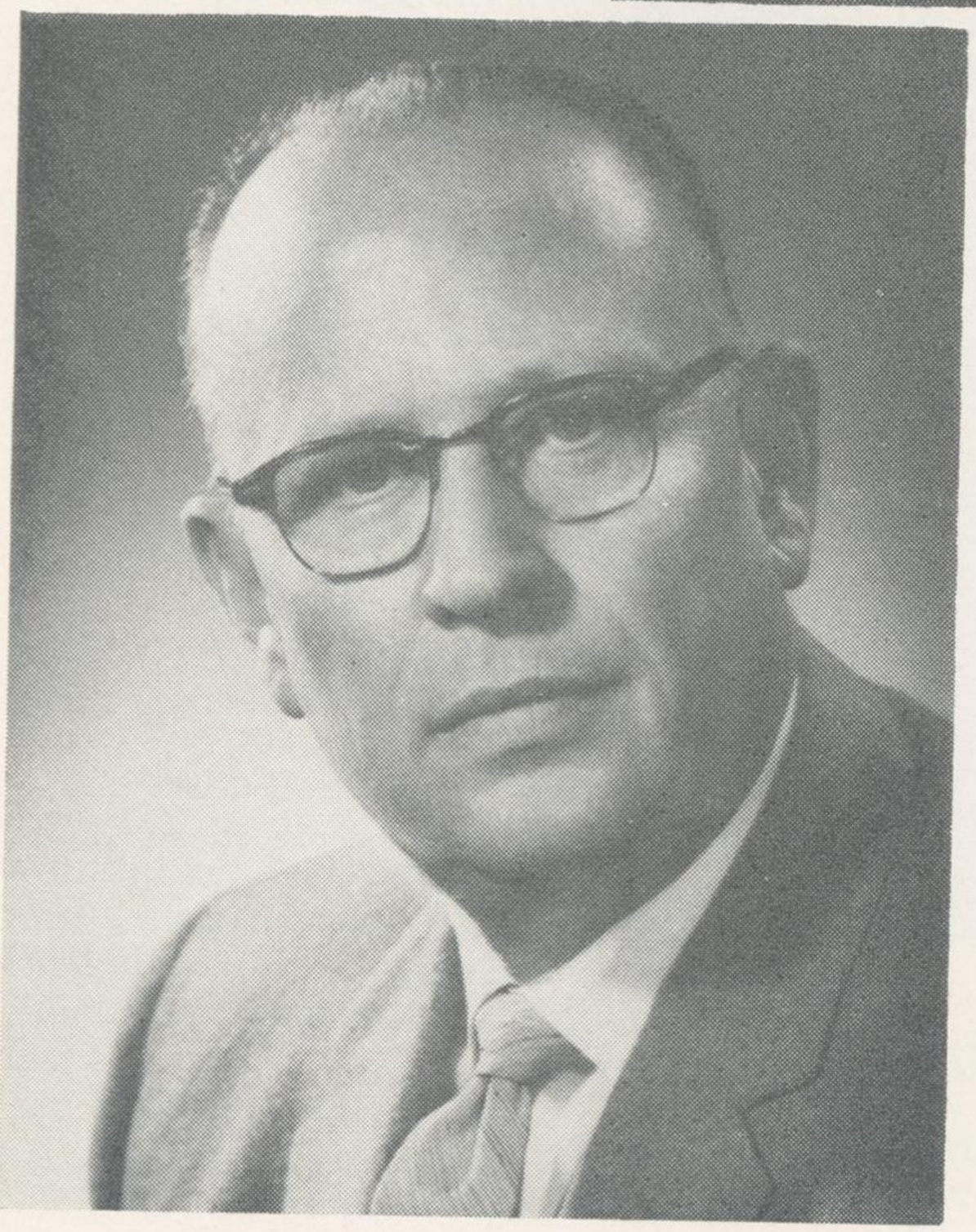


Thomas E. Kelley

PIEA General Chairman
1958 Conference
Dallas, Texas

* * *

Texas Eastern Transmission Corp.
Shreveport, Louisiana



Theil W. Sharpe

PESA General Chairman
1958 Conference
Dallas, Texas

* * *

Collins Radio Company
Dallas, Texas

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PRE-ENGINEERED

FOR LOW COST AND HIGH QUALITY

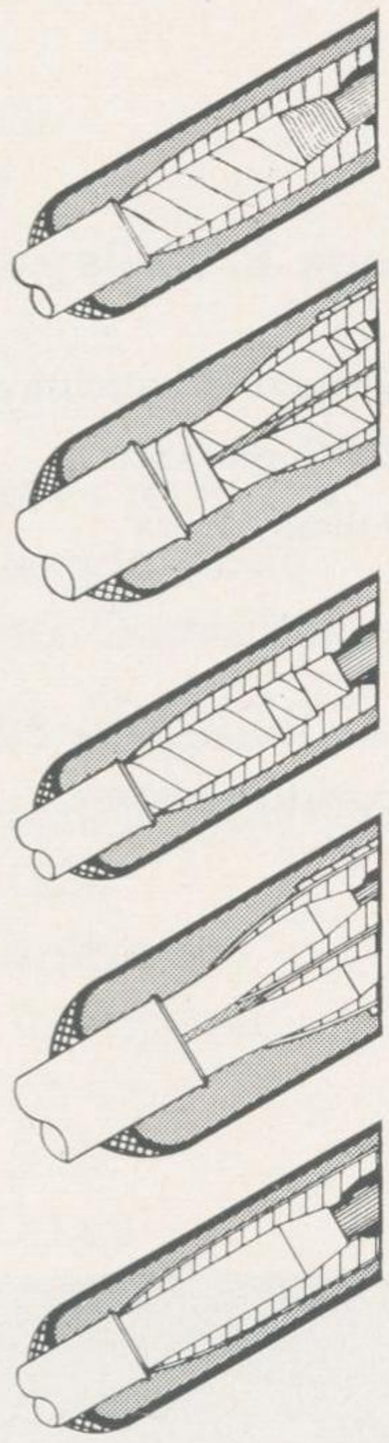
The joint design you need is most likely among the thousands of up-to-date pre-engineered designs in G&W files. They represent a thorough knowledge of the requirements of allied equipment used in power distribution.

The result at G&W is a keen appreciation for the need of designing cable joints and supplying materials that are best suited to a particular type of cable.

We can select the design you need in minutes. You save expensive time for engineering and ordering. G&W pre-engineering is complete to the last detail. Specifications, drawings and instructions cover the materials and the proper procedure for preparing a joint. They include each step from removing the sheath to making the splice and applying, when necessary, the protective cover or casing. This data is enclosed in the convenient unit package of materials you receive to make each joint.

Only the best quality materials are supplied by G&W. Overages are estimated to make reasonable allowances for variations of individual handling by splicers.

Do the job right the first time. Order G&W pre-engineered cable joints. Call a G&W representative for full details or write us for Bulletin JA56.



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3500 W. 127TH STREET • BLUE ISLAND • ILLINOIS
CANADIAN MFR.-POWERLITE DEVICES, LTD.• TORONTO, MONTREAL & VANCOUVER
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Introducing . . .

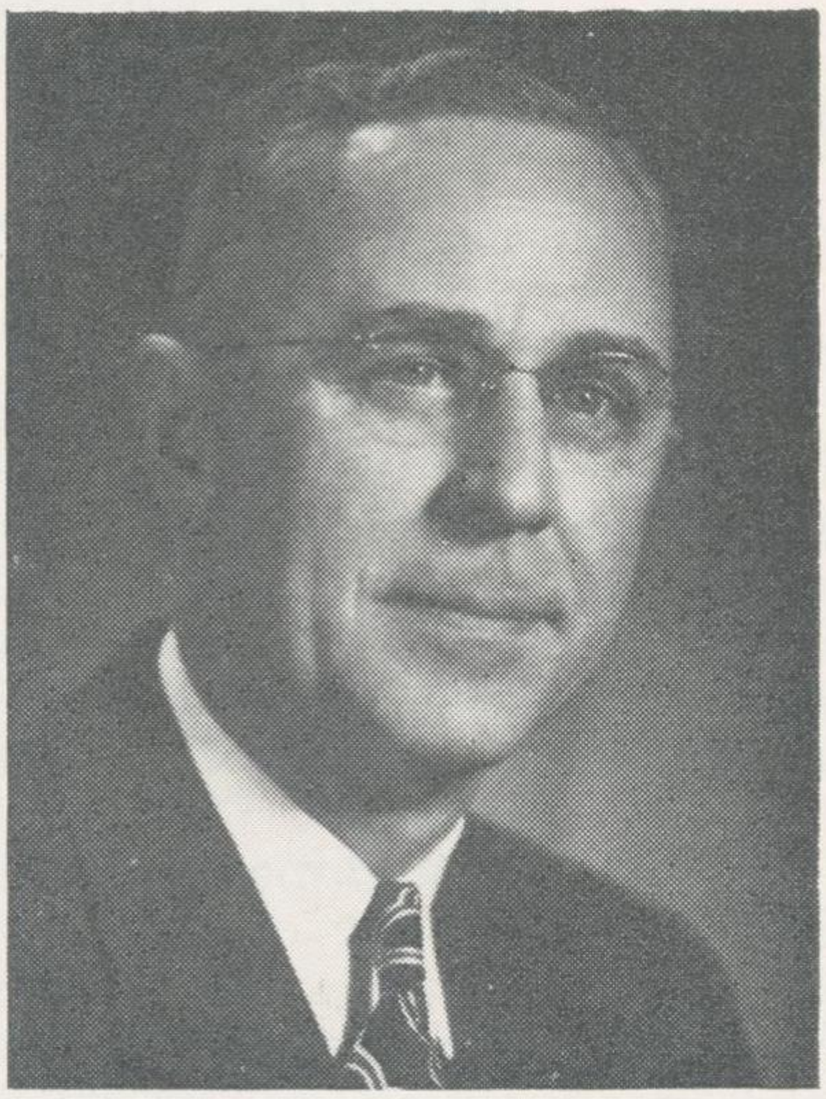
ROBERT LEE THORNTON

. . . Will give the welcome address in opening the 1958 conference.

With $6,000 borrowed capital in 1916, Mr. Thornton organized the Mercantile National Bank of Dallas; its assets today total more than $350 million. In January of 1947, he was elected Chairman of the Board of this institution which now ranks among the nation's 100 largest banks.

He is serving his 13th term as president of the State Fair of Texas, the largest state fair in the U. S.

Since 1953, Dallas has elected Bob Thornton Mayor three times. When the PIEA-PESA met in Dallas in 1954, Mayor Thornton welcomed them to the city.



LAURENCE ANDREW SUNKEL

. . . Will salute the petroleum industry in the opening ceremonies.

Mr. Sunkel began his career with the Atlantic Refining Company in 1919 as a general clerk in domestic production. Advancing through various positions of increasing responsibilities, he was made Vice President and General Manager, Crude Oil Production, in 1952, and was named to the Board of Directors in 1953.

In addition to actively participating in numerous civic organizations, Mr. Sunkel is a director in the API and Mid-Continent Oil & Gas Association, and a member of the President's Advisory Committee on Depletion.

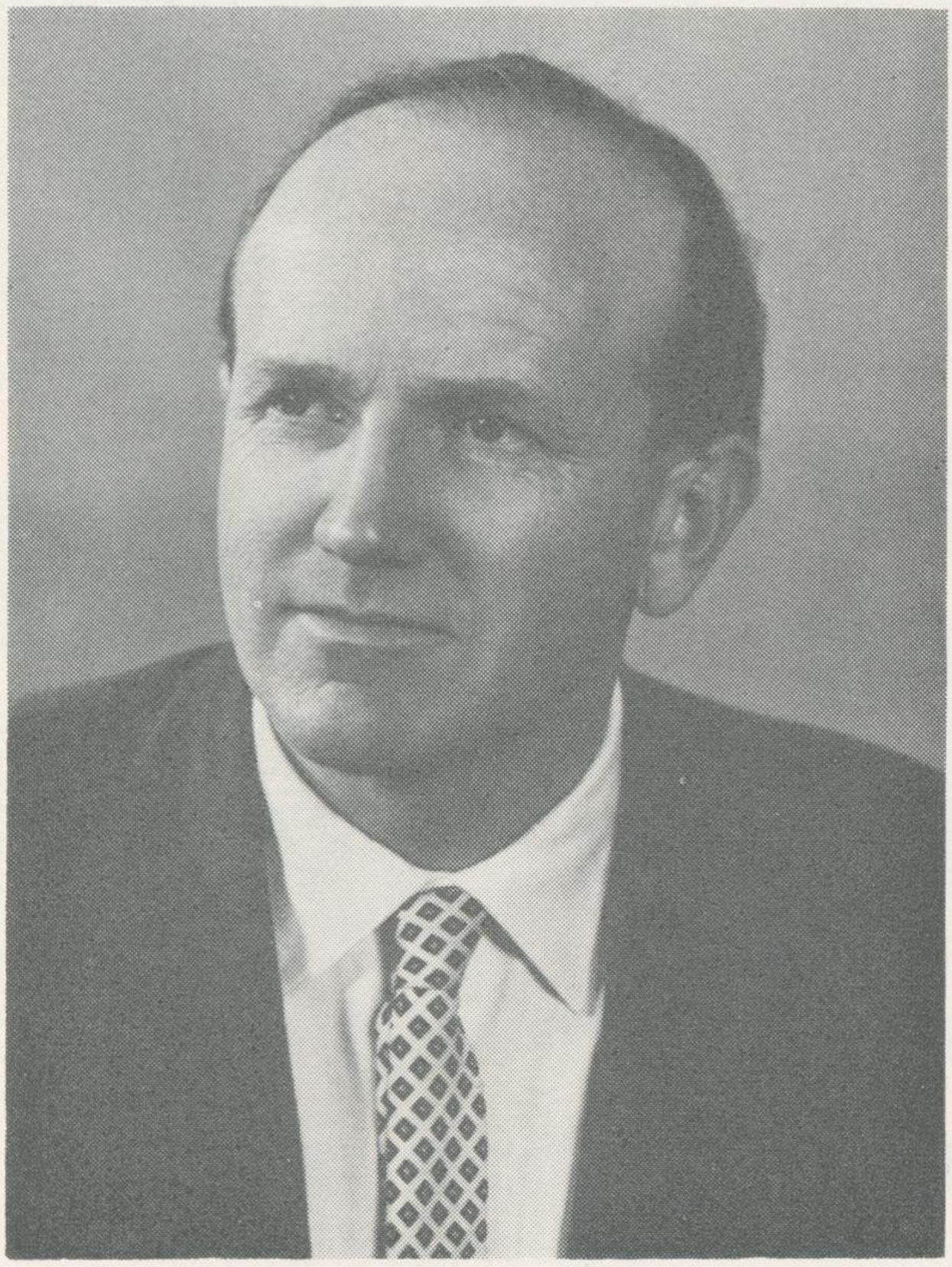
LEWIS A. BONDON

. . . Will address the conference Wednesday afternoon on "The G-Line R. F. Transmission Line."

Mr. Bondon, President of Prodelin, Inc., manufacturers of antennas and transmission line systems, will present a paper on the subject of "G-Line,"—a new and novel type of surface wave transmission line for use in the pipeline microwave operation.

Mr. Bondon is a member of the Montclair Society of Engineers, the Institute of Radio Engineers and has directed a number of standards coordinating groups on various types of coaxial transmission lines over the past fifteen years. Before starting his own company in 1945, Mr. Bondon was Director of Research for the Boston Insulated Wire & Cable Company and previous to that was a Development Engineer with the Breeze Corporation working on high temperature, high tension aircraft ignition problems. Mr. Bondon studied mechanical engineering at the Newark College of Engineering in Newark, N. J.

During World War II, Mr. Bondon served on the research and development coordinating groups, as well as on the various military associations coordinating cable and connector problems and has had an abundance of experience with solid and air dielectric coaxial cables and connectors.



DR. U. HUTTER

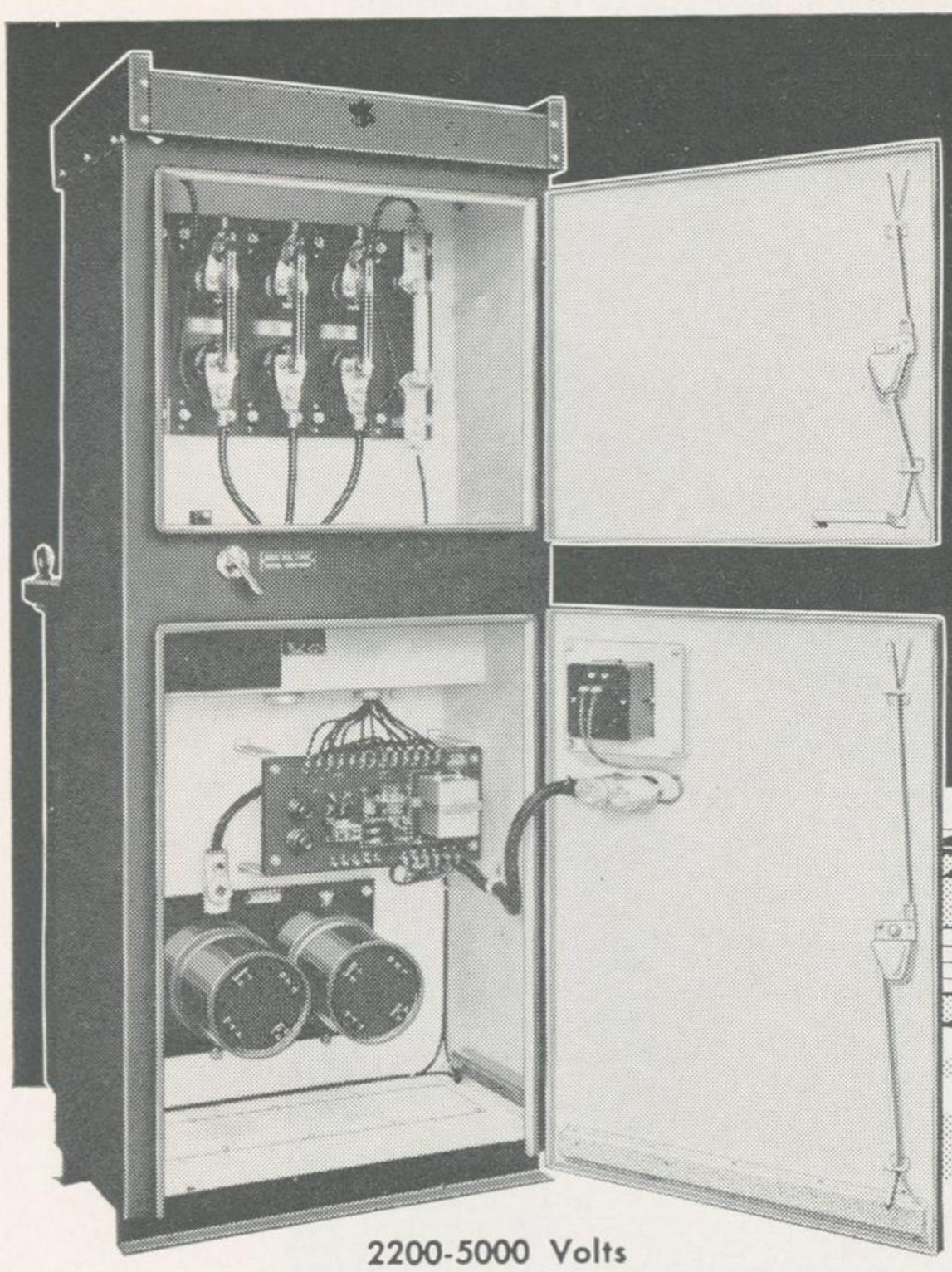
Particularly fortunate is the 1958 PIEA-PESA Conference in securing as a speaker Dr. U. Hutter, a man with a distinguished reputation from Stuttgart, Germany.

Automatic Power, Inc., of Houston, Texas, has arranged with Dr. Hutter to schedule his trip to the United States in order to appear on the Conference program Thursday morning, May 1. His subject will be "Energy From the Wind." Due to his research and development work on wind generator machines, considerable discussion has been aroused throughout Europe.

Dr. Hutter has long been considered one of the outstanding aeronautical authorities in Germany. His aeronautical work dates back to his development of the fundamental gull wing glider design when he was 15 years old. This basic glider design is still used in the high efficiency gliders, still in common use, throughout the world today. Another of his early projects was the development of the variable pitch aircraft propeller.

He developed the Venti motors during the war for the German Government, and worked on the basic designs of the V-2 rocket and the buzz bomb employed by the Nazis during World War II.

During the period between 1942



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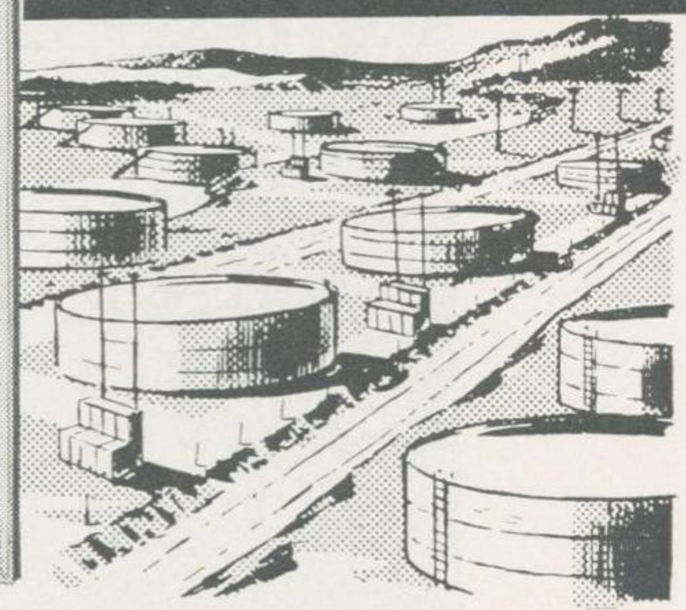

2200-5000 Volts

EC&M 50,000 KVA Interrupting Capacity Motor Starters

Outstanding Advantages

1. Reduced floor space
2. Low-cost Div. 2 design
3. 50,000 KVA interrupting capacity
4. Combination starter with Disconnect Switches
5. Corrosion resistant, weather-proof construction
6. Copper tungsten contacts for positive operation
7. Simple 3-wire TIME-DELAY UVP push button circuit
8. THERMAL-MAGNETIC Overload Relays give accurate motor protection . . . trip instantly on faults
9. All internal wiring complete

Petroleum engineers specify these starters for Division 2 semi-hazardous locations because they assure substantial savings in installation and operation.

Construction advantages include: drip-proof roof . . . tank-cover and front cubicle doors . . . oil switch which opens 220-volt control transformer before upper door can be opened to operate main line disconnects . . . hermetically sealed control circuit contacts . . . main contactor with alloy contacts oil-immersed in rear tank. On voltage dips, push button circuit maintained up to 2 seconds by simple 3-wire circuit, permits opening of "stop" circuit without delay.

EC&M 2200-5000 volt Starters are a'so available in Division 1 style for Class 1, Group D Hazardous Locations. For interrupting capacities above 50,000 KVA, EC&M VALIMITOR (volt-ampere-limitor) Starters are furnished in both Division 1 and Division 2 construction.

Write for 16-page Booklet 1062 for complete details.

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EC & M DIVISION • CLEVELAND 28, OHIO

and 1945, he was Director of Research at the Graf Zeppelin Institue in Stuttgart, Germany.

Dr. Hutter's aerodynamic theories and propeller design criteria have been widely accepted in the United States, and he has been invited on numerous occasions to appear before various technical societies to present technical papers and conduct discussions. In addition, Dr. Hutter has received numerous requests to come to the United States to work on current air power projects but has declined because he feels he can continue his scientific work in his native Germany with much better results.

Presently, Dr. Hutter heads the Allgaier Wind Power Division of the Allgaier Works in Uhingen, Germany, and, in addition to his regular duties there, he is a Professor of Aerodynamics at the Technical Institute at Stuttgart, Germany.

After installing one of Dr. Hutter's machines and recording considerable data on its operation, the Automatic Power engineering staff has incorporated an automatic standby power unit consisting of a diesel generator set which is started automatically to supplement the wind power machine when the wind fails to be of sufficient intensity for a considerable length of time. The entire package is designed to operate in remote areas for a period of four to six months without any human attention whatsoever. With modifications of this basic machine, reliable electric power can be supplied at remote installations for use in microwave, telemetering, and cathodic protection work.

Dr. Hutter is multilingual and can converse in Russian, French, German, Italian, Spanish and English.

Prize Winners On Nelson Electric Supply February Ad

The surprise package mentioned in the Nelson Electric Supply Company February ad has been sent to the following people:

John Holder, Service Pipe Line Co., Tulsa, Okla.

C. O. Shirley, Bartlesville, Okla.

Clyde R. Helper, Service Pipe Line Co., Tulsa, Okla.

W. F. Graham, Oklahoma City, Okla.

A. J. Clubb, Jr., Sun Pipe Line Co., Beaumont, Texas.

J. C. Stirling, Service Pipe Line Co., Tulsa, Okla.

Dale Van Zandt, Riddle & Hubbell, Tulsa, Okla.

Marjorie Walsworth, Texas Eastern Transmission Co., Shreveport.

Cleo M. Bradley, Andrew Corporation, Chicago, Ill.

K. R. Skeetz, Standard Oil Co. (Ind.), Whiting, Ind.

Harold L. Gutschow and Anthony Morrell, Microwave Department, Texas Eastern Transmission Corporation, Waynesburg, Pa.

R. C. Kurt, Phillips Petroleum Co., Bartlesville, Okla.

T. R. Shaw, Phillips Petroleum Co., Bartlesville, Okla.

F. C. Horn, Buckeye Pipe Line Co., Emmaus, Pa.

J. O. Mostrom, Phillips Petroleum Co., Bartlesville, Okla.

Glen W. Holladay, United Gas Corporation, Houston, Texas.

The surprise package was a set of eight Pin Up Girl Drink Markers.

R. H. DAVIDSON

. . . Whose talk on "Field Testing and Maintenance of Switchgear Devices" on Wednesday morning is of wide interest to the petroleum industry.

R. H. Davidson, Service Engineer for Nelson Electric Manufacturing Company, Tulsa, Oklahoma, has been in the company's Field Service department since 1948. During that time he has travelled to switchgear installations throughout the country to trouble-shoot electrical difficulties.

He is well known and respected by maintenance and operations personnel at refinery, utility and government installations. He has designed and built both a switchboard tester for functionally testing switchgear operation, and the portable relay tester now marketed by Nelson. This experience makes him well qualified to discuss the subject of electrical maintenance.

In the paper he will present, Mr. Davidson outlines the general and specific maintenance steps to be taken to eliminate unscheduled shutdowns.

JOHN K. HOWELL

. . . "Motor Protection—Electrical and Mechanical" will be discussed by Mr. Howell on Wednesday morning.

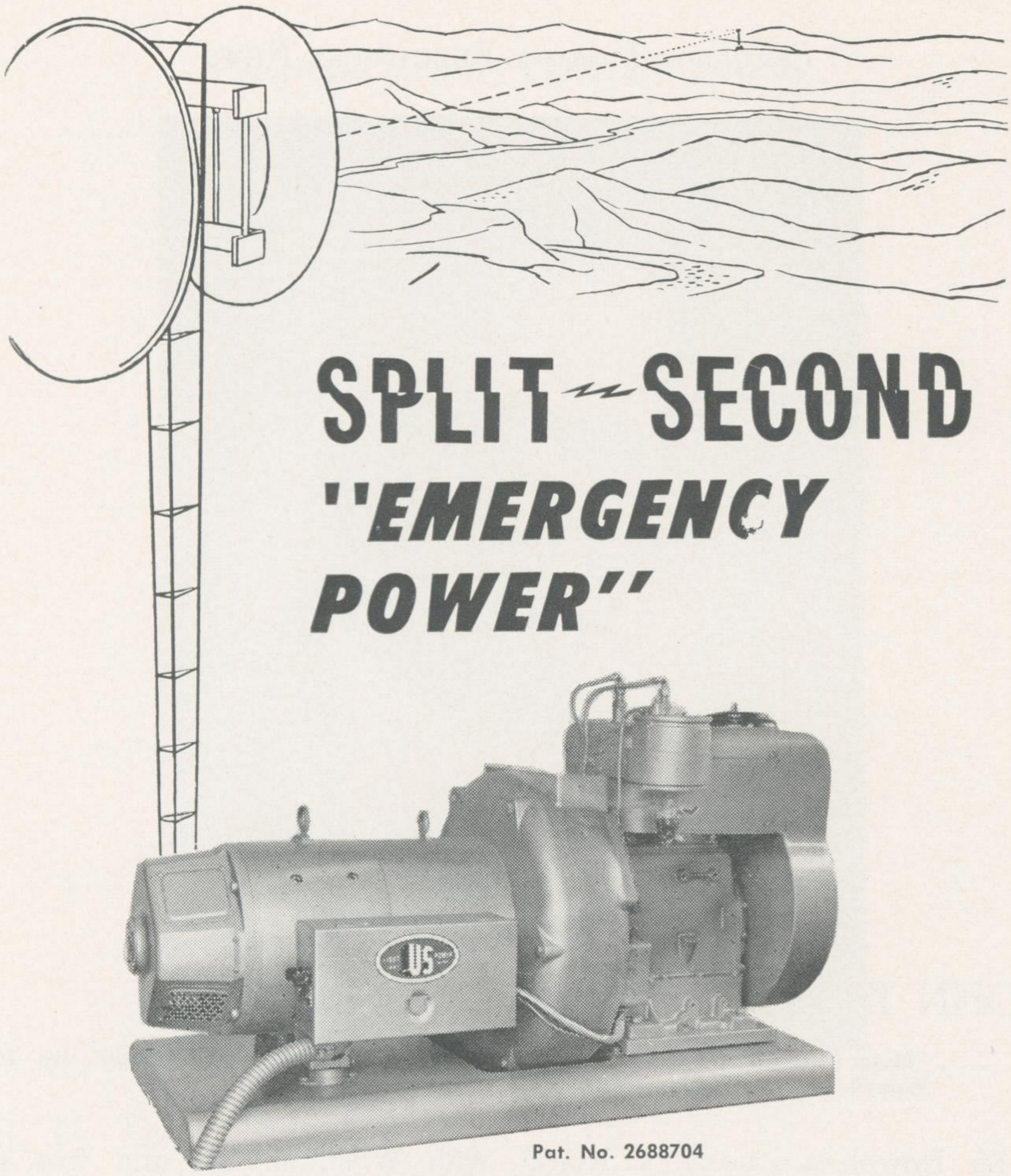
Mr. Howell is a native of North Carolina and joined the Navy after graduation from high school in 1941. The first year and a half of his naval career, he was aboard the U. S. S. Yorktown and was stationed in Hawaii.

His college training was obtained while in the Navy by correspondence courses and the Navy V-12 Officers Training Program. He attended Kansas State Teachers College, Pittsburg, Kansas, and Southern Methodist University, Dallas, Texas. He was discharged from the Navy in December, 1945, and graduated from SMU in February, 1946, with a B.S. degree in Electrical Power.

In April, 1946, Mr. Howell went with Westinghouse and was in training for regional work for two years. In 1948, he was assigned to the St. Louis Office, as Utility Consulting and Application Engineer. In 1950, he was transferred to Fort Worth, Texas, as supervising engineer of the electrical maintenance on the B-36 under contract with the Air Force.

In 1952, he was assigned to the Dallas Office as Consulting and Application Engineer, working with utility, industrial and aviation problems.

In 1954, he was transferred back to St. Louis as Regional Engineering Supervisor and last year was made Regional Engineering Manager.



SPLIT-SECOND "EMERGENCY POWER"

Pat. No. 2688704

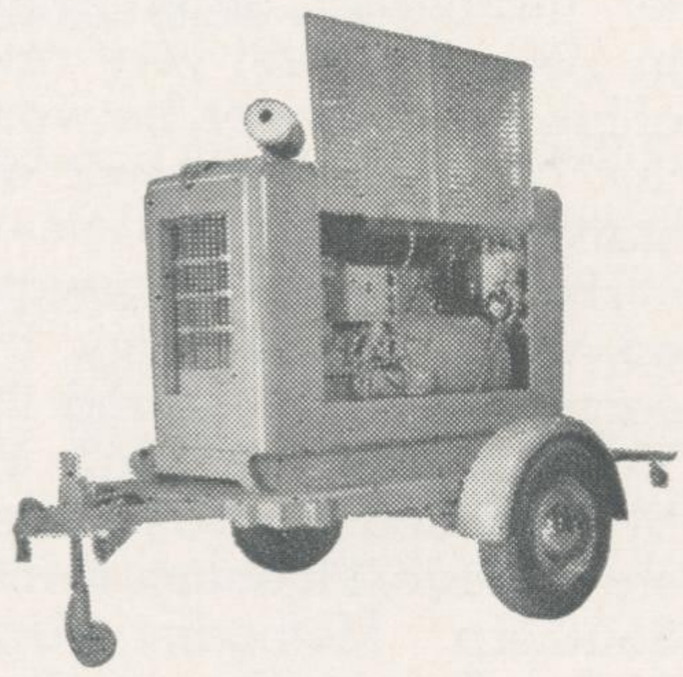
. . . with U. S. MICRO-POWER

BEFORE . . . voltage drops below a usable level . . . before . . . there is any loss in power to essential equipment . . . MICRO-POWER IS IN ACTION! Completely automatic, Micro-Power operates with the main source of power. No starting BATTERIES. No time-consuming "LOAD TRANSFERS". No power "outages" . . . EVEN FOR PRECIOUS SECONDS.

Micro-Power is a complete standby service that replaces several units of costly, more complicated equipment.

PORTABLE STANDBY POWER . . . UP TO 200 KW

U. S. Portable Power Units provide electricity on the job for tools and lights. Housing and trailer are designed for the need of the purchaser.



U. S. MOTORS MANUFACTURES STANDBY UNITS UP TO 200 K.W.

UNITED STATES MOTORS CORPORATION

102 W. FIFTH AVE. **OSHKOSH, WISCONSIN**

SHERMAN A. CRESON, JR.

. . . Addresses the Conference on Thursday afternoon, May 1, on "Standardization of Transformers."

A B.S.E.E. graduate from the University of Oklahoma and a native of the oil-producing area of Oklahoma, Sherman Creson is doubly qualified to speak on the subject he has chosen today. "Sherm" was introduced to the petroleum industry through part-time jobs in the oil fields during school vacations, and labored at such occupations as "roustabout," welder's helper, and an oiler in a compressor plant. (Mr. Creson's father, a retired gauger, worked at that occupation for 37 years for one of the major oil companies.)

While at the University, Sherm was an active member of the honorary electrical engineering fraternities: Eta Kappa Nu, Tau Beta Pi, and Sigma Tau, and was elected to the vice-chairmanship and later the chairmanship of the student AIEE on campus.

Joining General Electric after graduation, Sherm spent one year on the company's test program and one and one-half years on the Technical Marketing Program before being appointed as an Industrial Sales Specialist for the Medium Transformer Department at Rome, Georgia. Recently he has been making special studies on the particular transformer features and requirements of the petroleum industry.

Mr. Creson has authored several articles and is presently working on a comprehensive article dealing with the subject of his talk before the PIEA-PESA annual conference on "Transformer Standardization for the Petroleum Industry."

HADDON S. WILSON

. . . Will address the Conference on "Automation in the Petroleum Industry" on Tuesday afternoon.

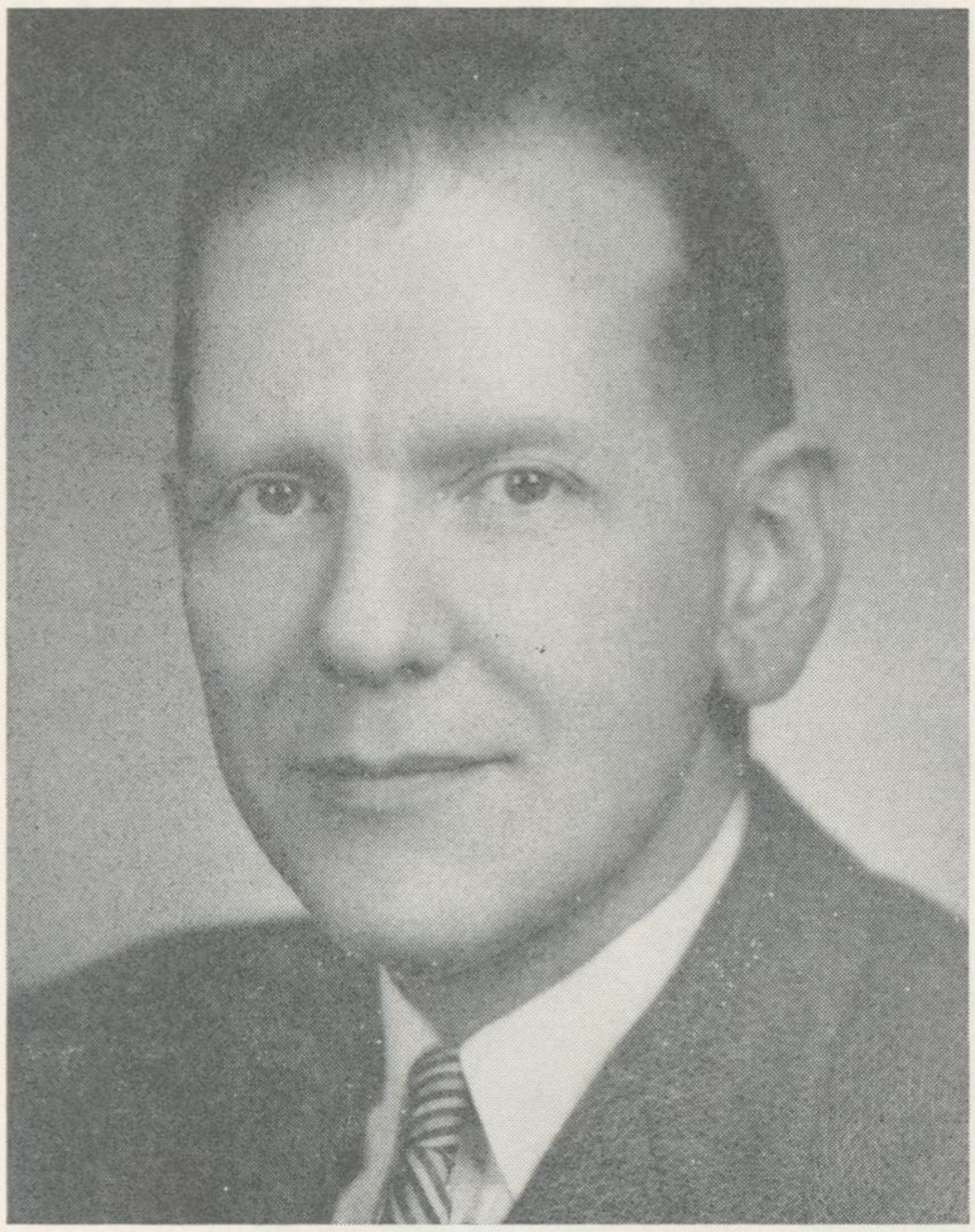
Included in Mr. Wilson's discussion of automation will be the use of microwave channels for remotely controlled functions.

Mr. Wilson received the degree of B.S. in Electrical engineering from Queen's University, Kingston, Ontario, in 1950.

He joined the Canadian General Electric Company in their test course and in January, 1951, transferred to that Company's Microwave Systems Engineering Group as a systems engineer.

Mr. Wilson joined Radio Corporation of America in 1953 and since that time has been engaged in multichannel VHF and microwave relay systems design.

He is an associate member of the IRE, AIEE and a Registered Professional Engineer in Ontario (Canada).



JOSEPH E. KELLER

As Special Representative of API, NPRFCA and PIEA, Mr. Keller keeps the petroleum industry well informed on communication developments in Washington, D. C. His "Petroleum Radio News Notes" appear in several publications, including ELECTRICAL NEWS each month.

Mr. Keller is associated with the law firm of Dow, Lohnes and Albertson in Washington.

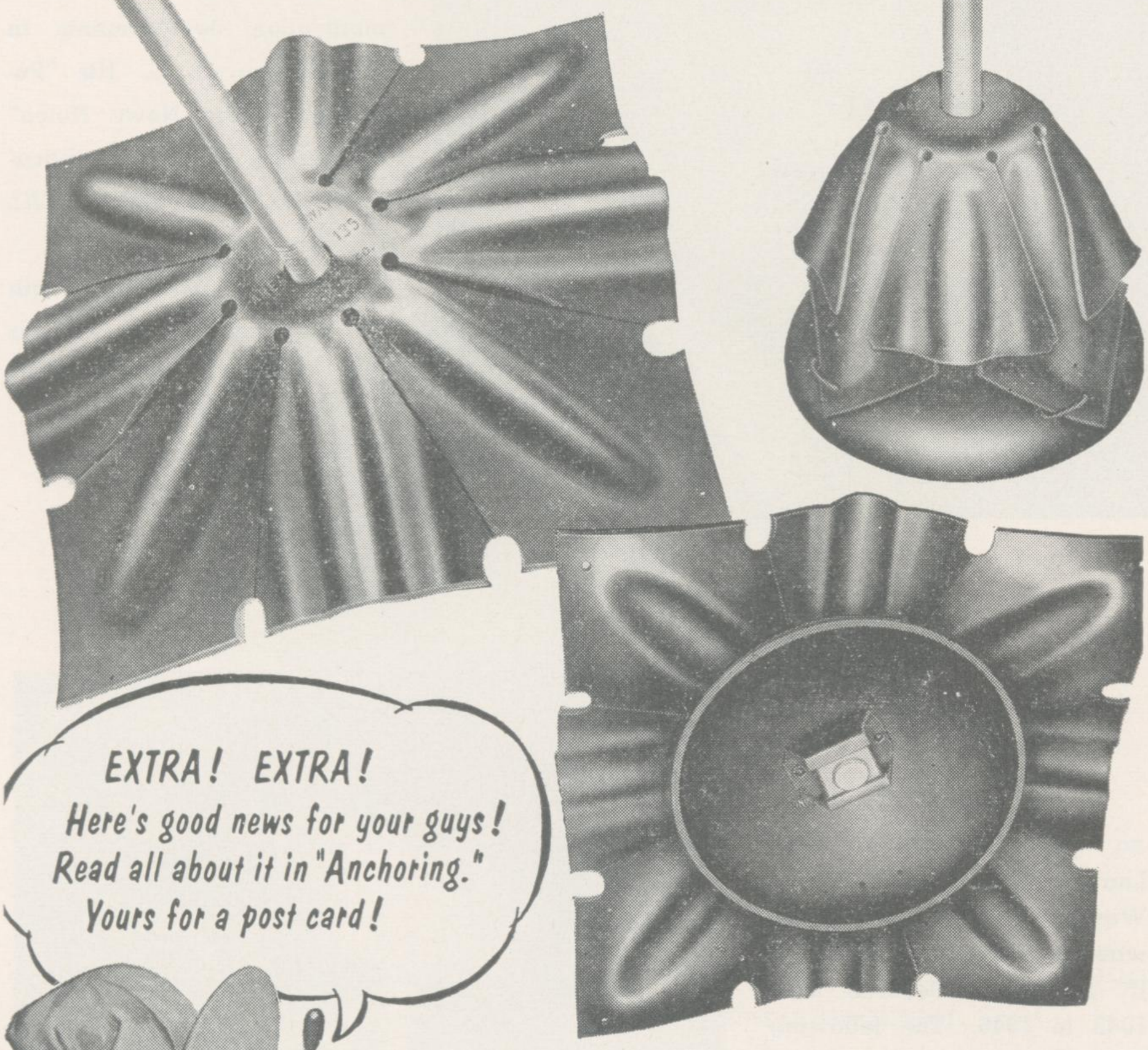
WARREN E. BAKER

Leaving legal practice in Fort Wayne, Indiana, Mr. Baker was on active duty with the U. S. Naval Reserve from 1942 to 1946. The following five years he spent as Hearing Examiner for the Civil Aeronautics Board, and in 1951 was Legal and Executive Assistant to the Chairman of the Board.

In 1953, he became General Counsel of the Federal Communications Commission.

CHANCE 8-WAY ANCHORS

It's not surprising that in every field test the Chance 8-Way Expanding Anchor holds more than its rated load because its design just makes common sense. *Eight* blades expand to form a pyramid shaped square —there is no wasted space between blades. The load is distributed *evenly*—all around the hole. It just seems logical that it should hold more, and it does. That's why it's on so many company standards. Your Chance Anchor Distributor can supply you from stock. *Specify Chance for Service!*



"ANCHORING" is the most complete guide to anchoring and guying ever developed. Shows how to choose the right anchor for every job—and how to install it *right*.

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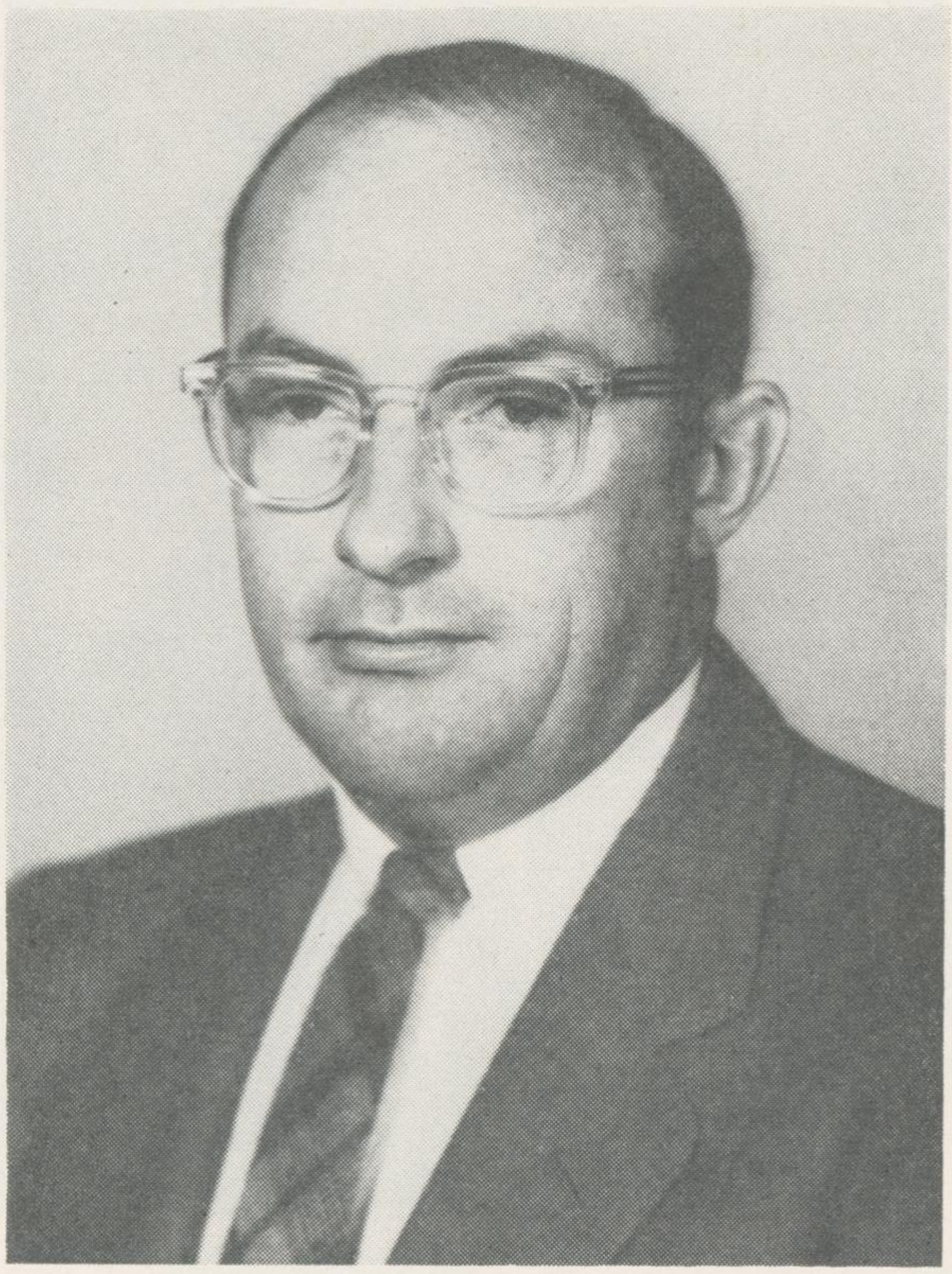
CENTRALIA, MISSOURI

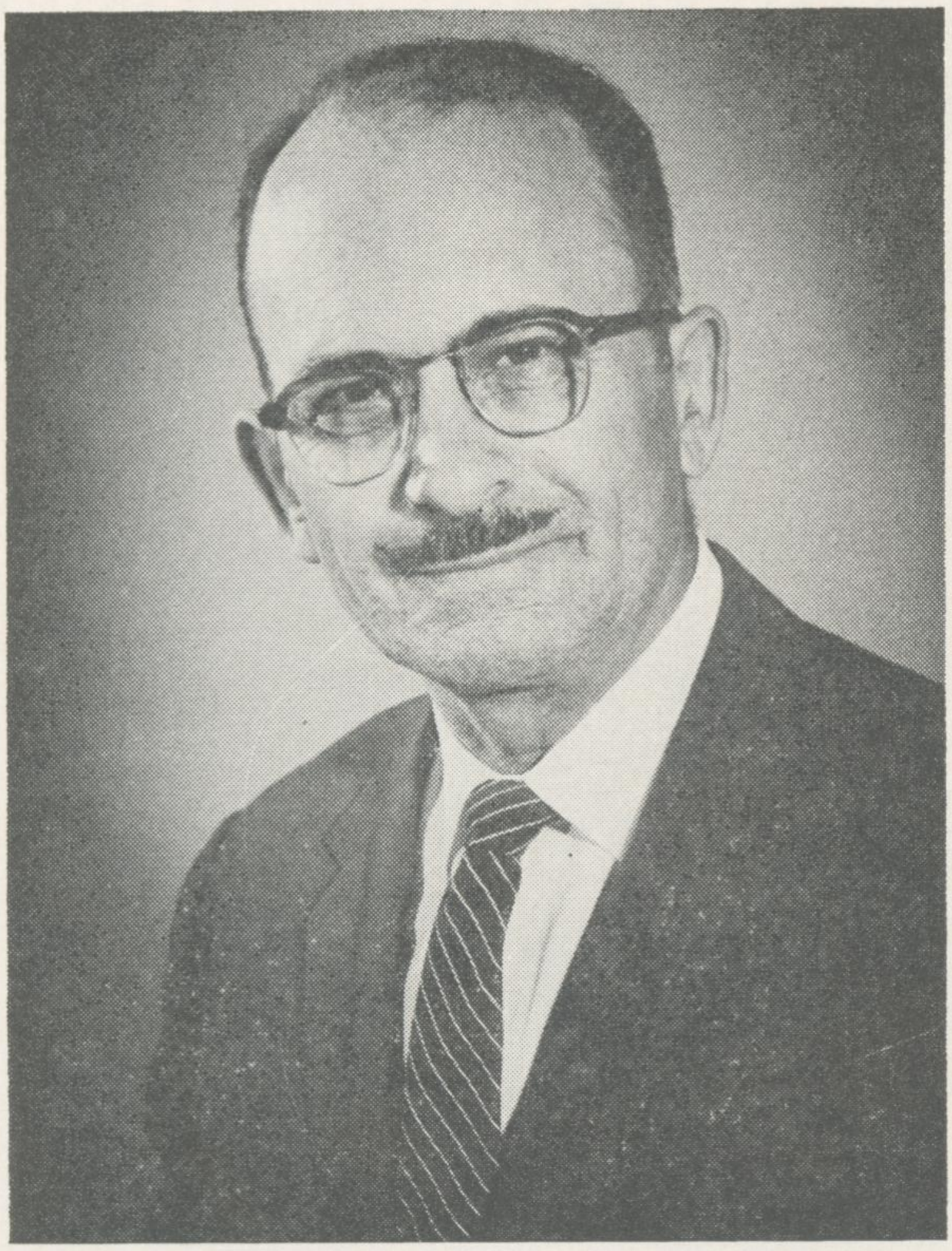


PEARCE R. BUTTERFIELD

. . . Heads the panel discussion at the Corrosion Symposium on the program Thursday morning.

After graduating from the University of Kansas with a B.S. degree in Civil Engineering in 1948, Mr. Butterfield was employed by Phillips Petroleum Company doing oil and gas lease survey work along the Gulf Coast. For the two years following, he performed engineering work pertaining to construction of gas transmission lines for Trunkline Gas Company. From 1952 to February of 1958 he was employed by Transcontinental Gas Pipe Line Corp. in the Corrosion Engineering Section. Mr. Butterfield is now Chief Engineer for World Supply Company, Houston, Texas.

Other members of the Corrosion Panel are: Vice Chairman Donald Montague, Pipe Line Technologists, Inc., Houston, Texas; John L. Pool, Magnolia Pipe Line Company, Dallas, Texas; D. D. Compton, Humble Pipe Line Company, Longview, Texas, and Marion E. Frank, Tennessee Gas Transmission Co., Houston, Texas.



HOLLY P. BRADLEY

. . . Will present a safety demonstration at 2 P. M. on Thursday, May 1.

Mr. Holly Bradley has been with Service Pipe Line Company, Tulsa, Oklahoma, for 28 years, and has spent 22 years in safety work. At present he is Safety Supervisor for his company.

For 12 years he has been a very active member in the American Society of Safety Engineers, and has served in all local offices as well as being chapter representative on the National Executive Committee.

At the present time, he is chairman of Mid-Continent Division, Petroleum Section of the National Safety Council. He is also Regional Vice President of the West Central Region of ASSE, and a member of the API Committee on Pipe Line Safety.

Included among his memberships are American Society of Safety Engineers, Tulsa Chapter; Oklahoma Safety Council; Tulsa Citizen's Safety Council; and American Petroleum Institute.

Automation Symposium

F. Vinton Long, Panel Moderator, assisted by eight men from the industry

F. Vinton Long
Texas Eastern Transmission Corporation
Shreveport, Louisiana

. . . In charge of design and construction of microwave radio communications, telephone, teletype, telemetering facilities for TETCO.

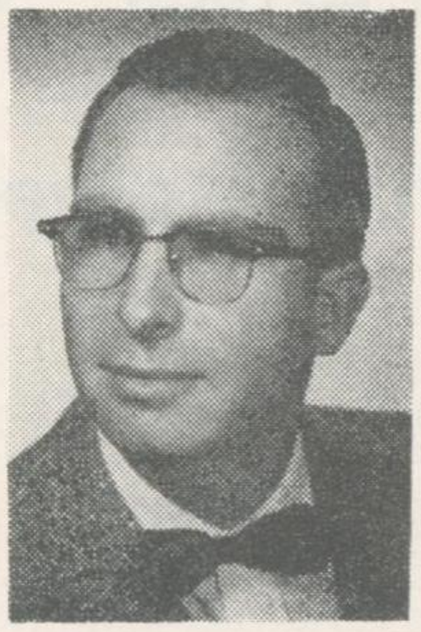
Prior service includes six years as communications superintendent of Mene Grande Oil Company of Venezuela, and seven years with Pan American Airways.

During World War II spent three years as Air Force Communications officer.

J. R. Hoffman
El Paso Natural Gas Company
El Paso, Texas

. . . Initial service with El Paso Natural Gas Company in 1950, and holds present position as Chief Electrical Engineer.

Served two years with U. S. Air Force. Obtained B. S. in Electrical Engineering at University of Arizona.



Robert W. Smith, Jr.
Gulf Interstate Gas Company
Houston, Texas

. . . Joined Gulf Interstate Gas in 1956 and is now in charge of Electrical Engineering Department.

Prior service includes four and one-half years with Honeywell Regulator Company as Industrial Instrument Sales and Application Engineer.

Received B.S. in Mathematics and B.S. in Electrical Engineering in 1951 from University of Houston.

Louis G. Maier
Plantation Pipe Line Company
Bremen, Georgia

. . . Joined Plantation in 1950, and presently is Electrical Foreman of its Central Division.

Prior to college, served in the U. S. Navy as electrician's mate.

Graduated with a degree in Electrical Engineering from Georgia Institute of Technology.

Fred S. Jones
Platte Pipe Line Company
Kansas City, Mo.

. . . With Platte since 1952, advanced through Communications Engineer, Electrical Engineer, Superintendent of Communications to present position of Superintendent of Communications and Electrical Engineering Division.

Spent two years as design and development engineer for Midwest Engineering and Development Co. of Kansas City.

During World War II served in Marine Corps as radio-radar technician.

Graduated from University of Kansas with degree in Electrical Engineering (Communications).

Justly known within his company as "Mr. Automatic."

Wm. E. Matthews
Southern Natural Gas Company
Birmingham, Ala.

. . . Employed by Southern Natural Gas in 1950, and has advanced to present position as Assistant Superintendent of Compressor Stations.

Of two years spent in U. S. Navy aboard a destroyer, one year was in capacity of Chief Engineer, with rank of Lieutenant.

Graduated from Georgia Institute of Technology with degree in Bachelor of Electrical Engineering.

Ralph J. Osborn
Sinclair Pipe Line Company
Independence, Kans.

. . . Immediately from college, entered service of Sinclair Pipe Line Co. in 1948 as Junior Engineer. Promoted in 1953 to present position of Assistant Chief Electrical Engineer.

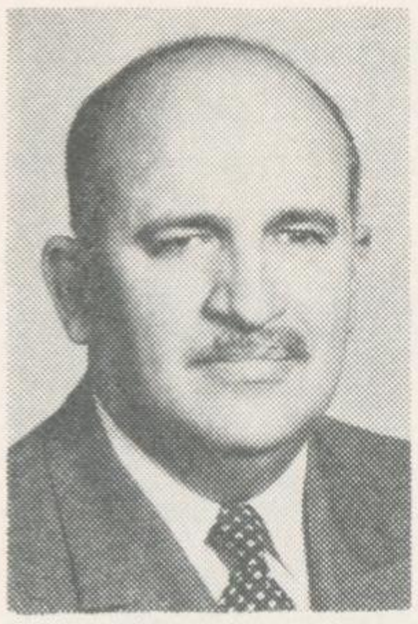
Received Bachelor of Science and Electrical Engineering degrees from Kansas State.

J. Gus Lewis
Service Pipe Line Company
Tulsa, Okla.

. . . Employed in 1934 by Service Pipe Line and has worked in Telephone and Telegraph Electrical Repair Shop, Radio Maintenance, and presently is engineer in Electrical Section, Engineering Department.

Prior service was spent with Western Union, A. T. & T., and Pure Oil Co.

During World War II, served in Radar Countermeasures Section, Electronics Division of The Bureau of Ships, Navy Department, Washington, D. C.



DONALD L. HOPE
Great Lakes Pipe Line Co.
Kansas City, Mo.

. . . Received his A.B. from the University of Kansas in 1934.

After working for several companies in various engineering capacities, Mr. Hope became Communications Engineer with Great Lakes Pipe Line Co., designing applications of CXR equipment, microwave, remote control facilities, and PAX telephone equipment.

He holds both 1st and 2nd class radio-telephone operator licenses, and has been an amateur radio operator since 1931.

Recipe for Barbecued Ribs

Select good lean, non-frozen ribs. About a side to each two people, if all are medium to heavy eaters. Before starting fire, run to Pak-A-Sak and get a stock of Miller's High Life—this is not for direct application to the ribs that are to be cooked, but for dousing inside of the ribs that are not to be cooked—at least some people will like this as a dousing-inside-of-onesself sauce better than scotch or bourbon. Have a scotch highball, or a beer, or a bourbon and water (from here on when we say "a drink" we mean whatever you started on). Chat.

Check hydrator for onions, celery, etc. Don't become dehydrated—have a drink. Check cabinet for herbs—all kinds. Chat. Drink. Start herb sauce (can't tell you how to make that here, for that is another recipe). Build fire in pit. Don't cut ribs up before cooking, it is always more fun to try to cut them when they are piping hot and burning your hands. Set out herbs for dry rub—you actually don't rub it on, you sprinkle it. How's your drink? Chat. Check fire.

Let your guests tell you (without your interrupting except to gurgle your drink) how well they barbecue and what a good pit they have and how they never heard of a dry barbecue sauce and especially one made out of herbs. After that exercise in self control you'll need a good drink. Have it!

Ask somebody to set the table, slice the onions and fix the radishes and stuff. You can have your drink leisurely while they do the work. Check fire.

Go back to Pak-A-Sak—for same reason you went the first time, only this time get more. Hurry back and fix a drink.

Check sauce, and put in a twit more garlic—in the sauce, not in your drink. Check herbs previously set out to make the rib-rub. Get ginger that you had overlooked. Find your drink. Check the guests' drinks. Fix yourself another one. Mix herbs. Look at the clock. Heavens it's later than you think!

Fix drink, sprinkle ribs and put 'em on the fire. Now relax and have a drink. Heavens it's drunker than you think! Chat and drink through at least two or three more.

By this time enough guests should have given up and left, so there will be plenty of ribs left for those left and maybe some left over for a meal during the week.

—Author anonymous by request

J. A. Polhemus Retires April 1, 1958: Succeeded by R. P. Jones With Standard Oil Company of California

J. A. Polhemus

Fortified with a B.S. degree in Electrical Engineering from the University of California, Mr. Polyhemus was employed by Standard Oil Company in 1919.

His career in communications began before his employment by Standard with his war service in the Radio Section of the Army Air Service working with mobile (aircraft) radiotelephones.

In 1921 he transferred to Standard's general Engineering Department in San Francisco where he remained until he was made Superintendent of the Telephone and Telegraph Division in 1924.

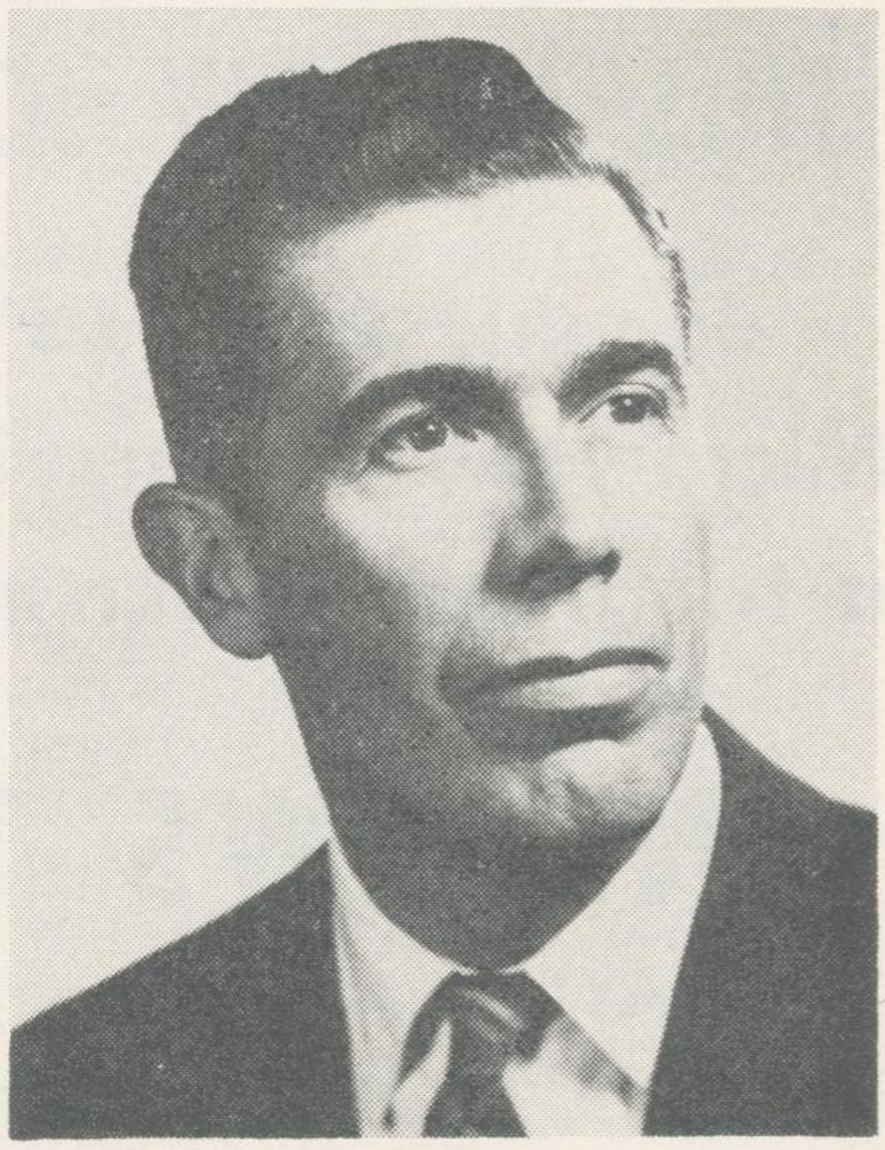
Mr. Polhemus became a member of PIEA in 1950, and in 1953 was elected vice president. He became president of PIEA in 1954, and was Chairman of the Board in 1955. During these years, he has served on numerous committees.

Mr. Polhemus has also been very active on the API's Central Committee on Radio Facilities, and has worked with the regional and national NPRFCA.

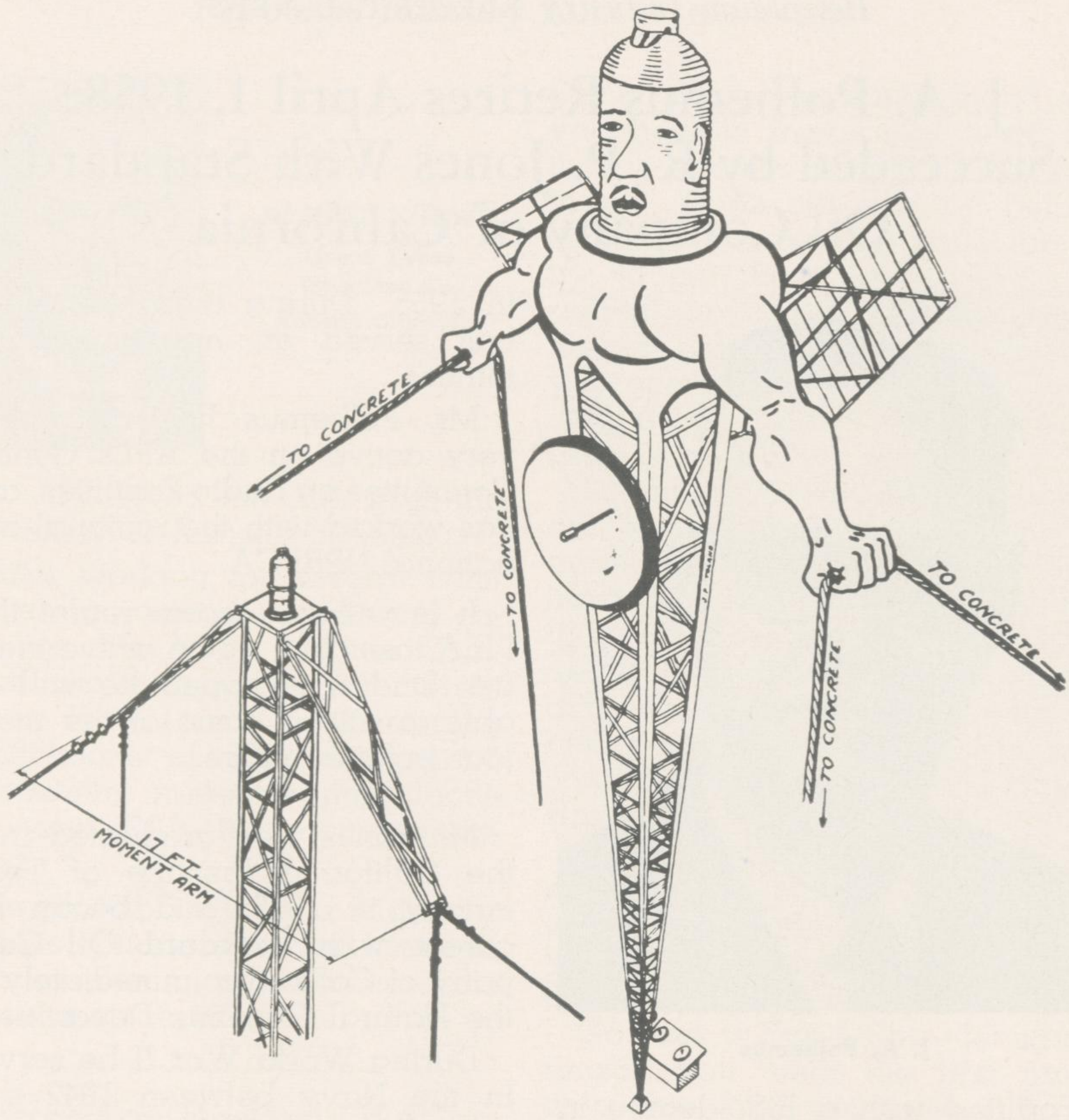
It is with a sincere regret that PIEA loses him as an active member, and it is hoped he will be able to attend some of the meetings in future years.

Mr. Jones was graduated from the California Institute of Technology in 1935, and began his career with Standard Oil Company of California immediately in the Natural Gasoline Department.

During World War II he served in the Navy between 1942 and



R. P. Jones



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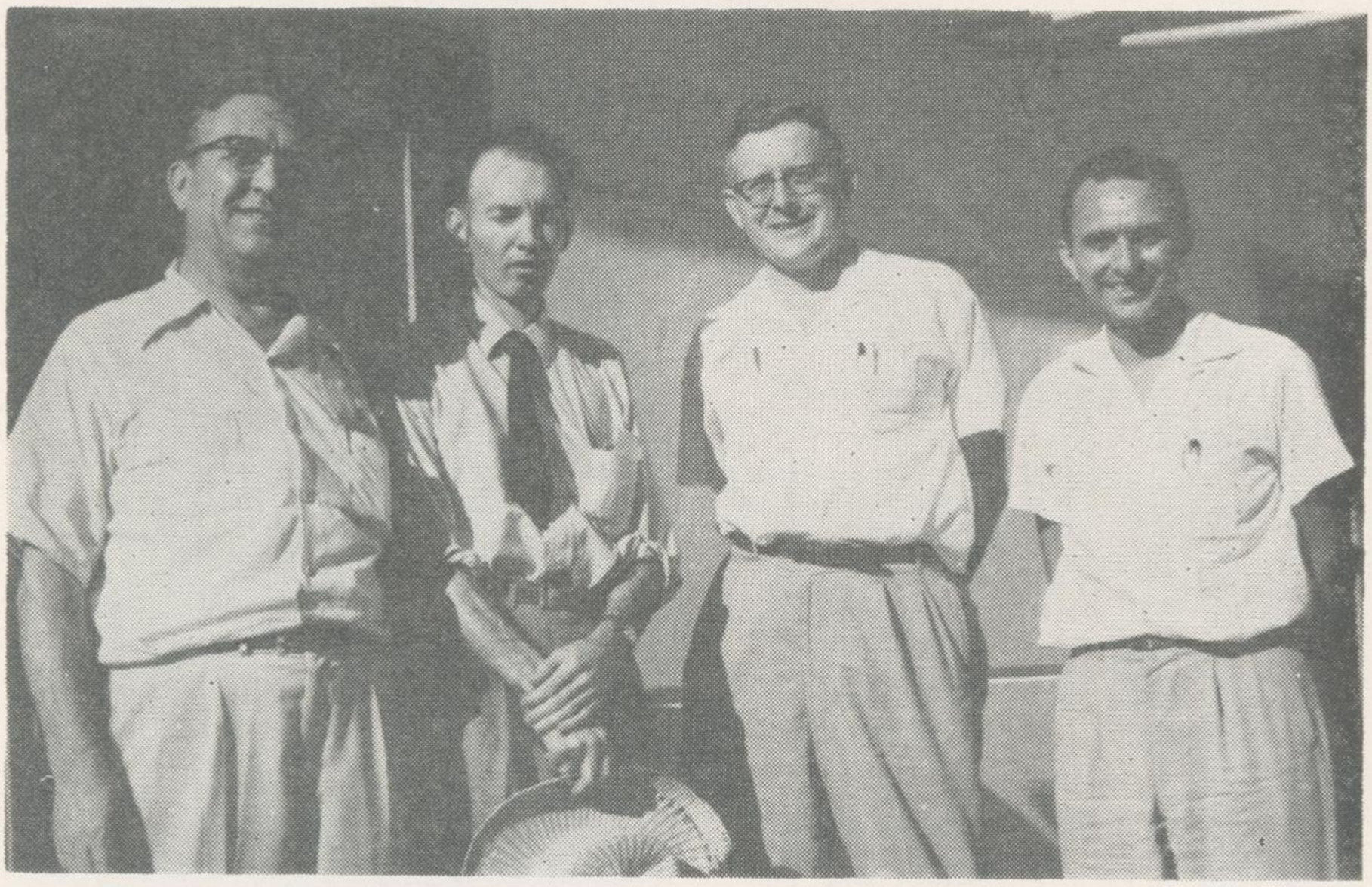
1945 in degaussing work to make ships safe against action of magnetic mines.

Upon returning to his company from service, he elected to go into communications work and joined the Telephone and Telegraph Division as Communications Engineer.

In communications work, he is active in NPRFCA, and will attend the 1958 PIEA Conference as the official representative of his company.

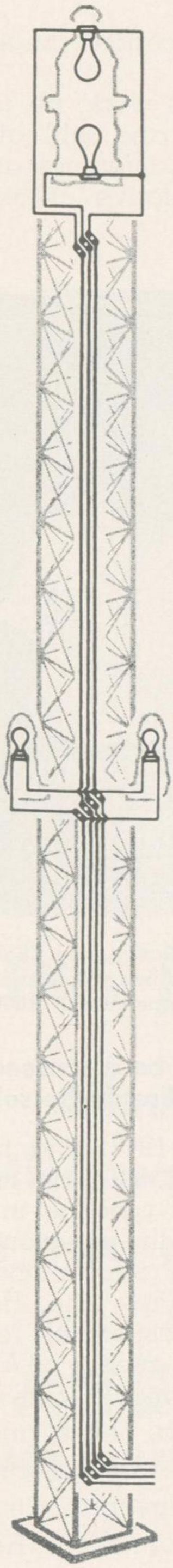


Taken at Evant, Texas, microwave station during microwave system installation, July, 1957. Left to right: Frank Geisel, Atlantic Pipe Line Company; Fred Berry, Railway Communications, Inc.; Ed Dunn, Atlantic Pipe Line Company, and Lou Shapercutter, RCA.

"Unusual Features of Two New Microwave Systems" will be discussed at Wednesday's afternoon session by E. B. Dunn and Frank Geisel.

Frank Geisel started with The Atlantic Refining Company as a Marine Radio Operator in 1937, and has since then held nearly every job in Atlantic's Communications Division. He came to Port Arthur, Texas, in 1946 and to Dallas in 1947. In 1952 he succeeded Tommy Hart as Communications Supervisor for the Atlantic Pipe Line in Dallas and in 1954 he became Communications Superintendent for the Southwest area.

Ed Dunn started with The Atlantic Refining Company as Electronics Engineer in 1947, and in 1949 was associated with the installation of the first pipeline microwave system for the Keystone Pipe Line, now the Products Division of The Atlantic Pipe Line. He has continued to be responsible for the engineering and design of Atlantic's microwave and VHS systems in Pennsylvania, Texas, and Venezuela. In 1954 he became Communications Superintendent for Marketing areas for Atlantic Refining Company.



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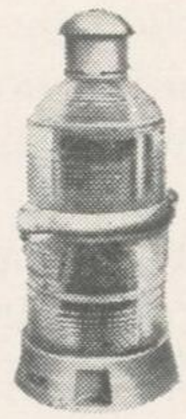

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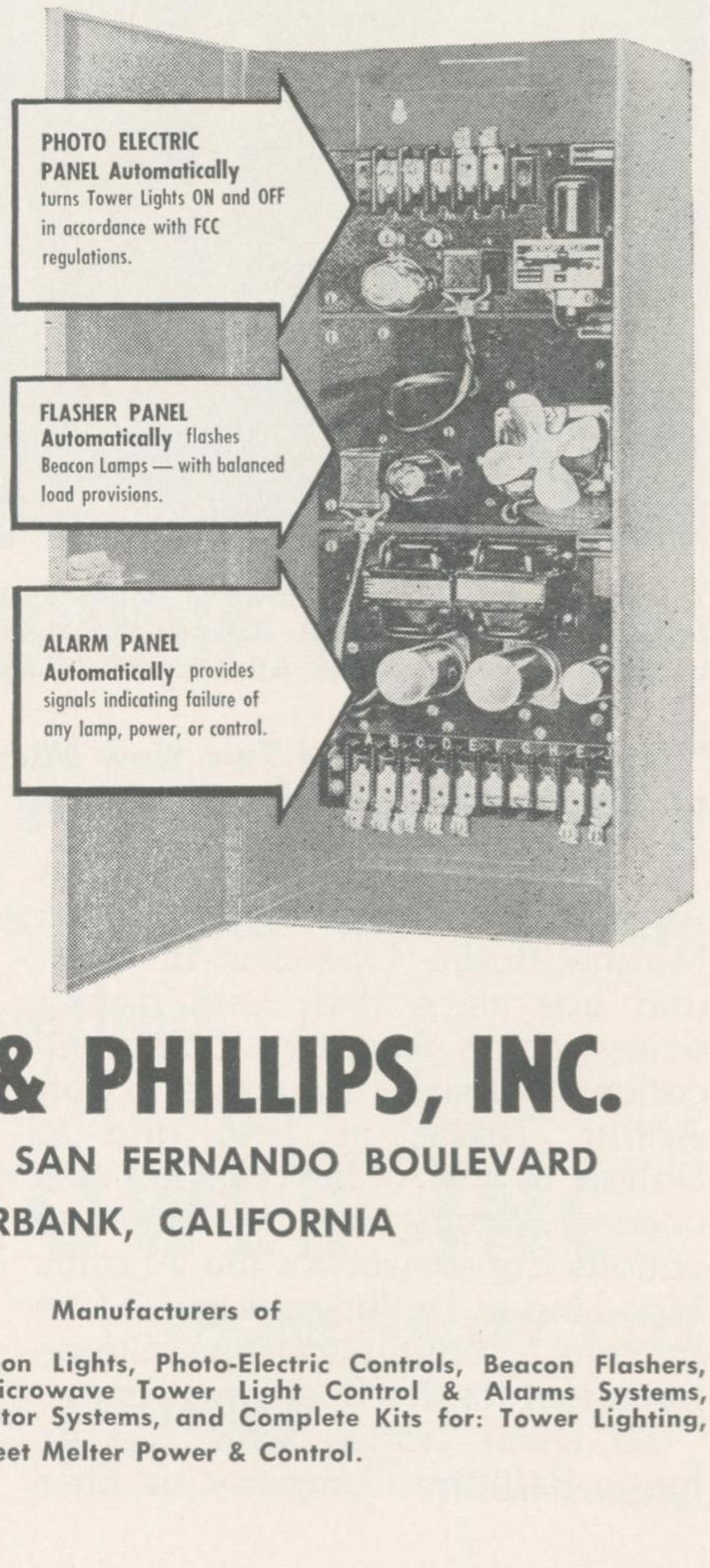

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A. L. Stegner Assumes New Responsibilities; McKinley Rhodes Becomes PIEA Representative for Tennessee Gas

Al Stegner

Of great interest to PIEA-PESA members is the announcement that A. L. Stegner has assumed other duties with Tennessee Gas Transmission Company at Houston, Texas, and that his successor in PIEA work will be McKinley Rhodes.

Mr. Stegner became a PIEA member in 1948, and two years later was made General Chairman of the 1950 Conference. He was instrumental in forming the PIEA Corrosion Committee, and acted as panel leader of this group from 1950 through 1956.

He was elected vice president of PIEA in 1950, served as president in 1951 and chairman of the Board in 1952. While he was president, he appointed the first Scholarship Committee, and he has been an active worker on this committee which has established scholarships at four universities.

Al has worked on many PIEA committees, and could always be counted upon to do a thorough and successful job on whatever assignment he was given.

Heartiest wishes are extended to Al for every success in his new responsibilities.

McKinley Rhodes, known to most members of the PIEA-PESA as "Mack," becomes the official PIEA representative for Tennessee Gas, and plans to attend the 1958 conference.

When Mack was made PIEA representative, he together with his brother, "Dusty" Rhodes, became the first brother-combination PIEA has ever had among its official members.

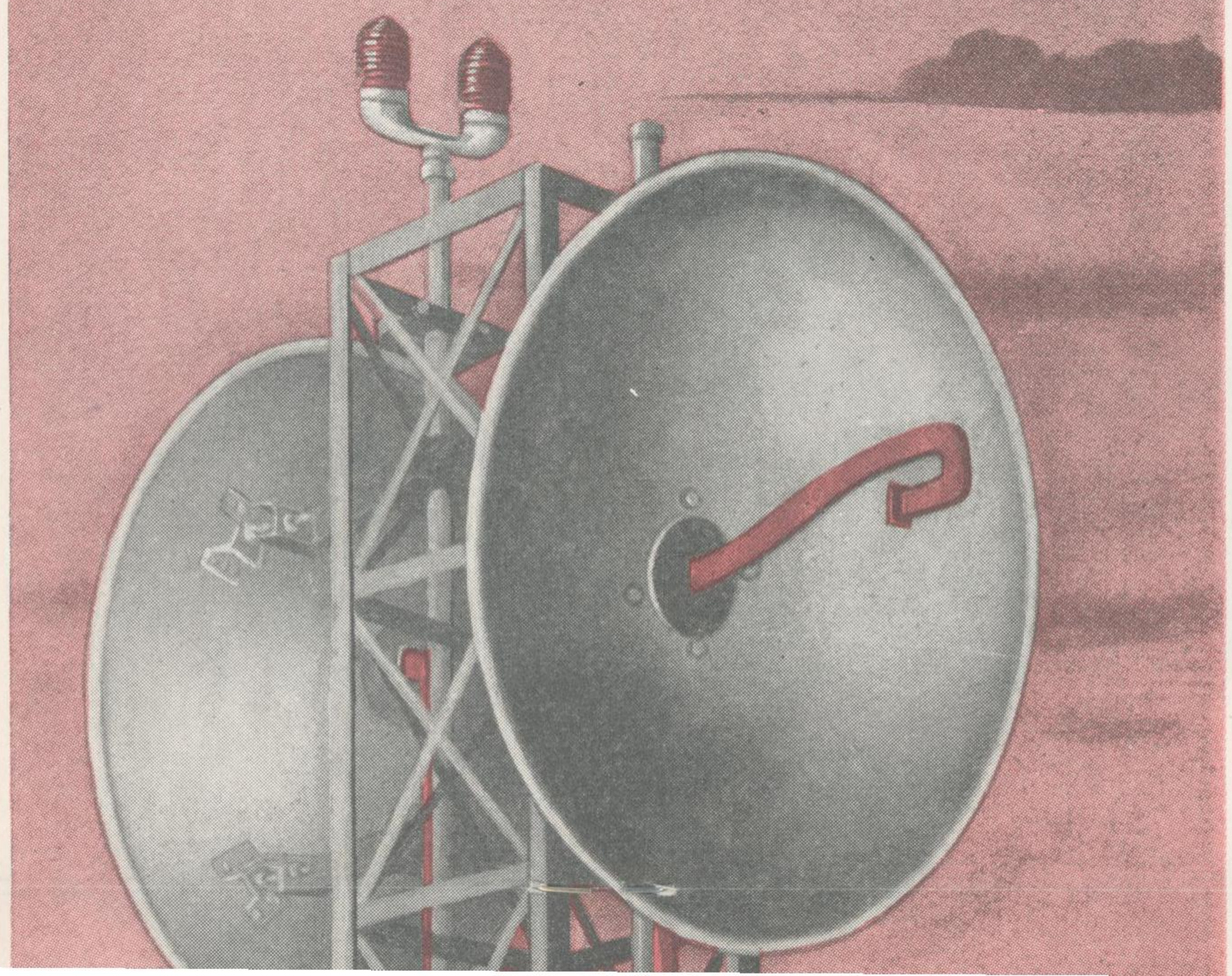
Mr. Rhodes has been with Tennessee Gas Transmission Co. for ten years in radio communications. Prior service includes almost ten years in the broadcasting industry, largely spent with KPRC in Houston, Texas.

Every year since 1948 Mack Rhodes has worked in some capacity with conference arrangements for all Houston conventions. In 1957 he served as Program Committee Chairman. In 1950, together with Warren Williams, he handled the program.

Mr. Rhodes is presently technical supervisor for all radio communications system for Tennessee Gas Transmission.

(Mr. Rhodes' photo did not quite make the April deadline: look for him in the May issue.)

Reliability



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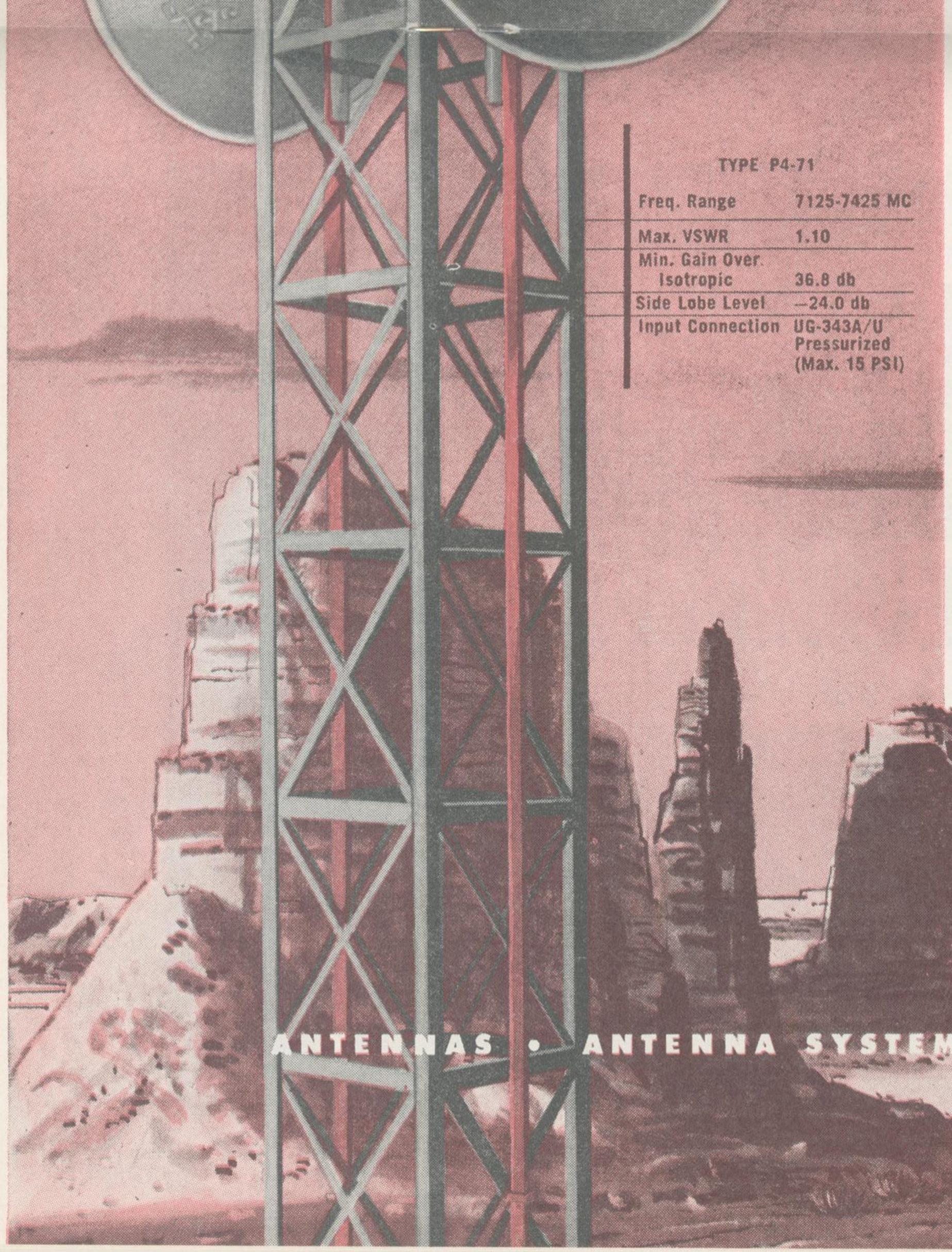
Frequency Range	ANDREW Type Number			
(MC)	4 ft. dia.	6 ft. dia.	8 ft. dia.	10 ft. dia.
890 - 920	1004A-1	1006A-1		1010A-1
920 - 960	1004A-2	1006A-2		1010A-2
1700 - 1850	2004A-1	2006A-1	2008A-1	2010A-1
1850 - 1990	2004A-2	2006A-2	2008A-3	2010A-3
1990 - 2110	2004A-3	2006A-3	2008A-3	2010A-3



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Freq. Range	7125-7425 MC
Max. VSWR	1.10
Min. Gain Over Isotropic	36.8 db
Side Lobe Level	—24.0 db
Input Connection	UG-343A/U Pressurized (Max. 15 PSI)

920 - 960	1004A-2	1006A-2		1010A-2
1700 - 1850	2004A-1	2006A-1	2008A-1	2010A-1
1850 - 1990	2004A-2	2006A-2	2008A-3	2010A-3
1990 - 2110	2004A-3	2006A-3	2008A-3	2010A-3
2450 - 2700		P6-24		P10 - 24
3750 - 4200			PS8 - 37	
5925 - 6425	P4 - 59	P6-59	P8 - 59	P10 - 59
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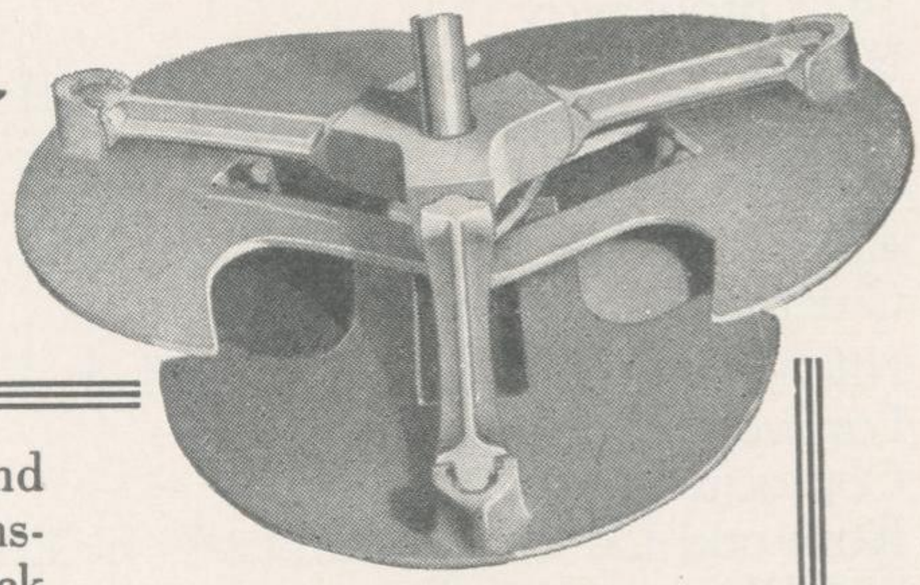

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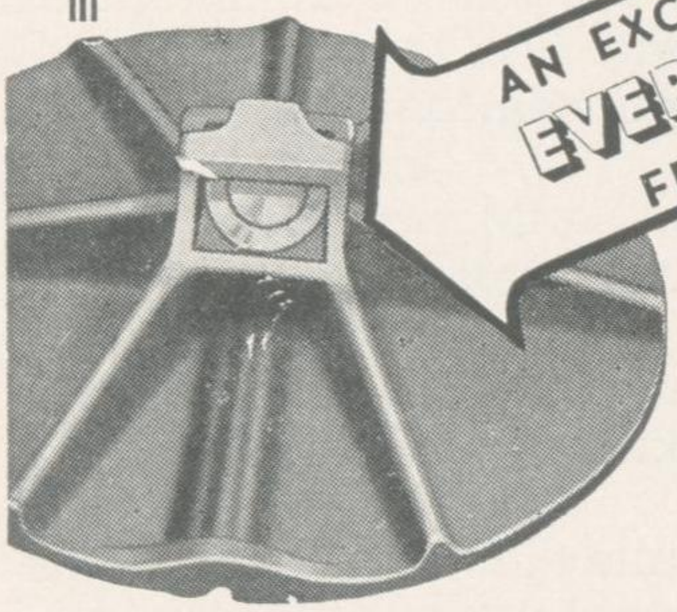

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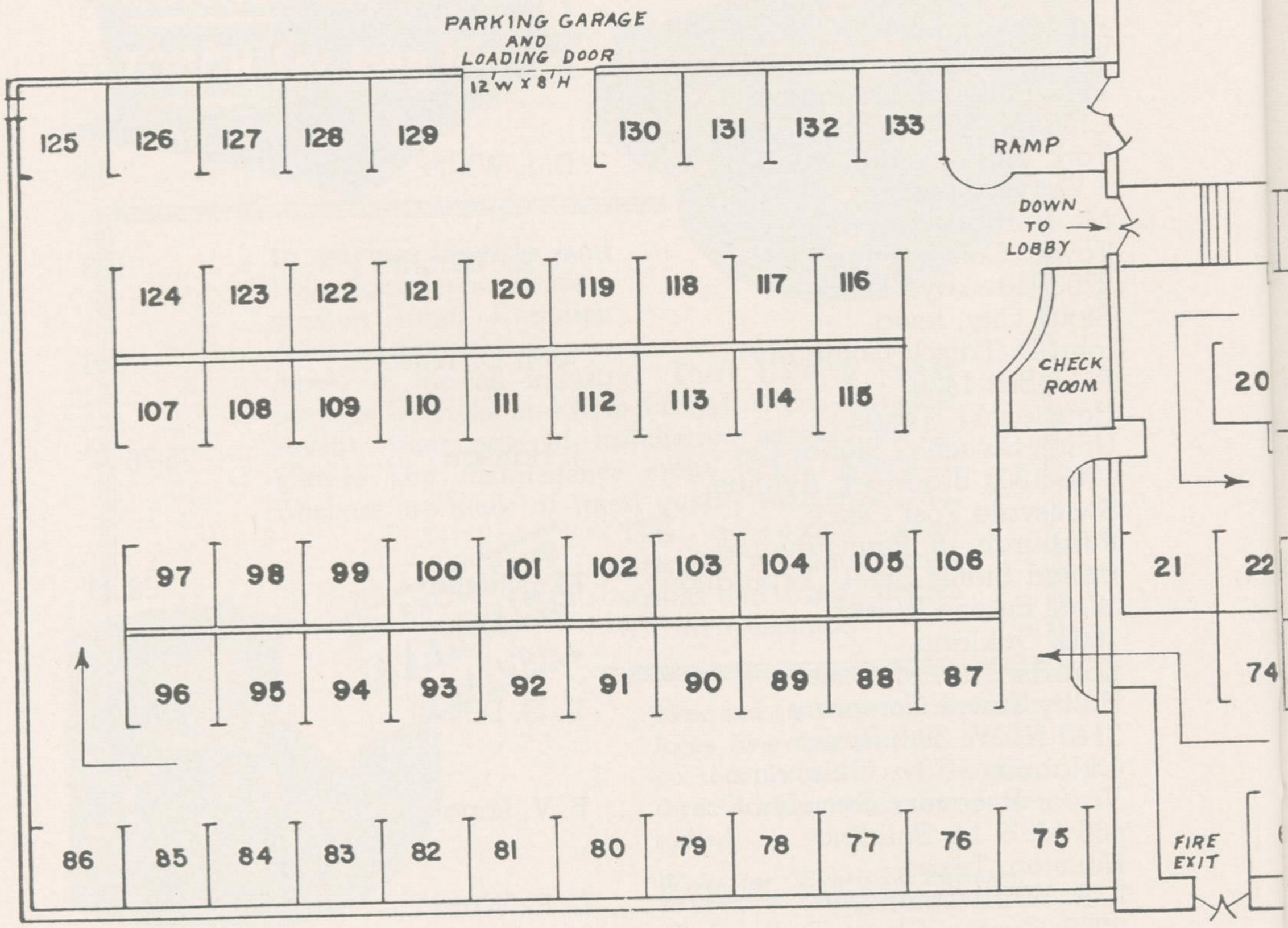
- Texas produces 44% of the nation's petroleum and 40% of the nation's natural gas.
- This conference provides an opportunity for the exhibitors to meet and discuss with those in the Petroleum Industry who are the administrators, operators, and users of electrical equipment and communications systems.



PLAN OF EXHIBIT FLOOR

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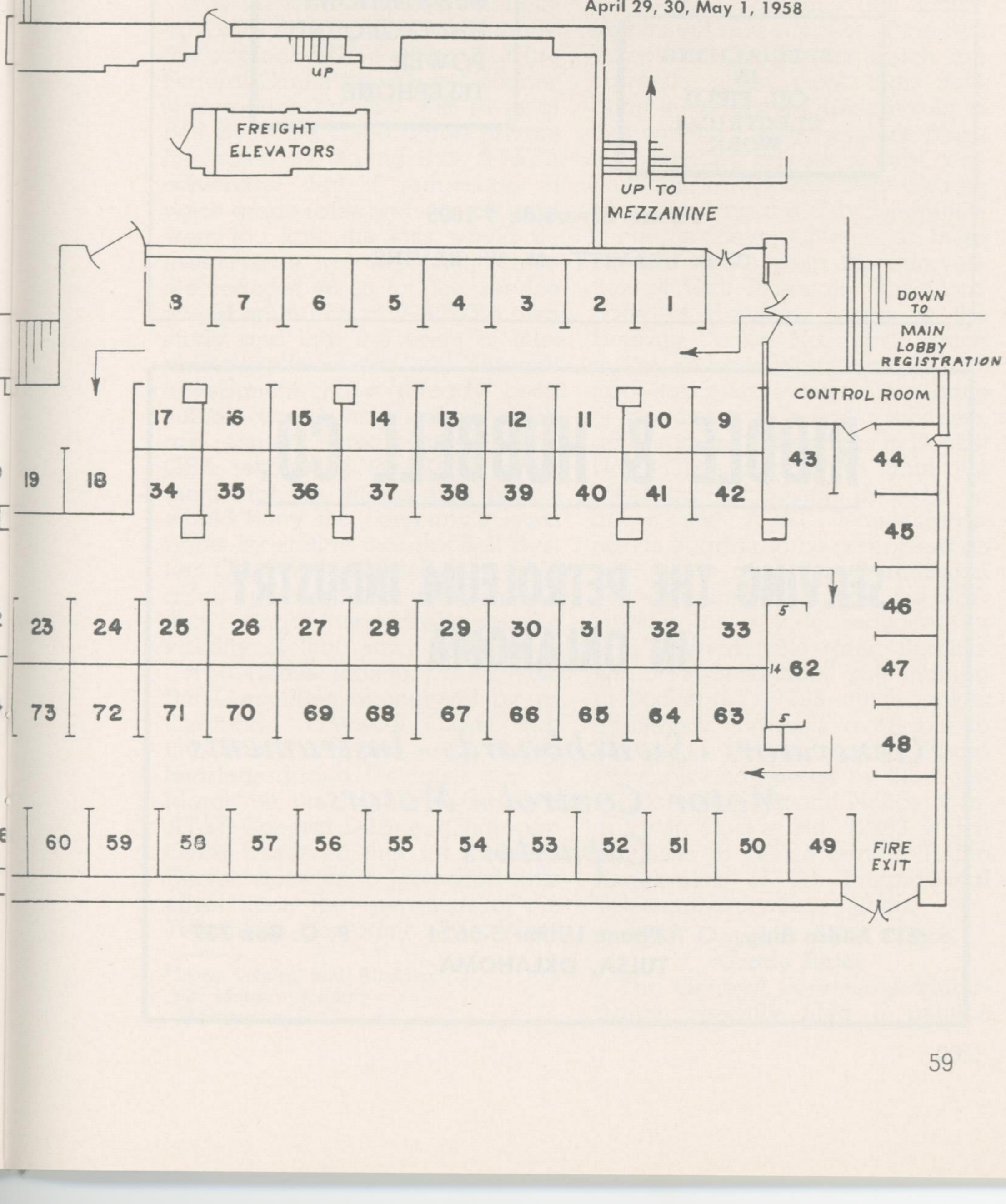
and the
PETROLEUM ELECTRIC SUPPLY ASSOCIATION

Hotel Adolphus, Dallas, Texas
April 29, 30, May 1, 1958



Petroleum Radio News Notes

BY JOSEPH E. KELLER*

The General Services Administration replied to AT&T's answer to the original GSA Petition that the Federal Communications Commission reduce by 25% the rates of Bell System's voice grade private line rates by stating that AT&T's contention that if reductions in voice grade rates were made, and were too low, the loss would be irretrievable was unrealistic since the reduced rates for the service would be in line with AT&T's own study and that the users of telephone grade service, including the government, have already been subject to excess charges which are equally irretrievable. Also, GSA responded to AT&T's statement that the interim rate orders would deny the company's legal rights by stating that the Bell System Companies already have had a full opportunity for hearing and they cannot now challenge the validity of their own exhibits.

The House Judiciary Anti-Trust Sub-Committee announced by its Chairman, Emanuel Celler, that the Sub-Committee will begin hearings during the latter part of March on the Justice Department AT&T Consent Decree. Chairman Celler observed that the Consent Decree appears to have had little effect upon the operations of the Telephone Company. The Western Electric Company has continued as the sole supplier of the Bell Telephone Companies which are currently using more than 90% of all telephone equipment sold in this country. AT&T's future plans for providing private mobile communications systems may also be scrutinized by the Sub-Committee.

Further developments of interest this month were the intervention of Gulf Interstate Gas Company of Houston, Texas, in the Hearing Docket No. 11972 which is an investigation into AT&T's tariff to cover lease-maintenance of private mobile radio systems, adjournment of Hearings in Docket Nos. 11645 and 11646 until the latter part of March in order to allow the AT&T lease-maintenance hearing to be completed as well as to give the Commission sufficient time to consider the GSA Petition for a 25% reduction in AT&T private line rates, finalization of "split-channel" rule making in Docket No. 11993 which makes additional channels available to the Land Transportation Radio Services, and release by the Commission of its Second Notice of Inquiry in Docket No. 12263 which proposes to revise certain Radio Regulations of the International Telecommunications Union.

GSA Opposes AT&T Voice Grade Rates

The General Services Administration recently filed a petition

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600 Munsey Building
Washington, D. C.

with the Federal Communications Commission calling for an immediate 25% reduction in rates of Bell Systems voice grade private line services. This reduction would cover telephone, telephotograph, remote metering, supervisory control and miscellaneous signalling services for a one-year period and would be re-evaluated at the end of that time.

GSA based its petition on cost studies which had been submitted by the American Telephone and Telegraph Co. Long Lines Department in their "private lines" case. The principal reasons given by GSA supporting their petition were that the government now expends approximately $25,000,000 annually for private lines service obtained from AT&T; that programs now in development will now greatly increase this amount; and, that the AT&T exhibits are based on revenues for services furnished in December, 1955, and January, 1956, which since this time have been rapidly expanding coincident with reduction in unit cost and that consequently the companies' operating expense is now spread over a broader base.

The American Telephone and Telegraph Company answered the petition of the General Services Administration by asking for a dismissal of the GSA petition in that "there is no requirement either in fact or in law that the rate of earnings from every part of a service be the same as that from the service as a whole, or that the rate from earnings from every class of service be the same as the average from the group of services of which it is a part." AT&T also pointed out that an increase in volume of services rendered does not constitute a basis, per se, for reductions for rates, since costs can and do increase with volume and no specific relationship of net earnings to gross revenues can be assumed.

The General Services Administration replied to the AT&T view that if reductions in voice grade service were too great, and higher charges would have to be collected, the loss would be irretrievable, by stating that such a situation could not come about since the reduced rates for the telephone grade service would be in line with AT&T's own study and that the users of telephone grade service, including the government, have been subject to excess charges which are equally irretrievable.

In response to AT&T's statement that an interim rate order would deny the company's legal rights, GSA argues that the Bell System companies already have had a full opportunity for hearing and they cannot challenge the validity of their own exhibits.

Commission Finalizes Rule Making in Docket No. 11993

During the month the Federal Communications Commission finalized certain "split-channel" rule making in Docket 11993 affecting Part 16 of the Commission's Rules governing the Land Transportation Radio Services. The rule making grants to the Motor Carrier Radio Service five frequency pairs on an exclusive basis, Taxicab Radio Service ten frequency pairs; and two frequency pairs were made available to automobile clubs in the Automobile Emergency Radio Service. In addition, five frequencies are available for base, mobile and operational fixed stations for all land Transportation Radio Services.

Dan Arnold Indicates Special Industrial Radio Service May Stay

Mr. Daniel H. Arnold, Chief of FCC Safety and Special Radio Services Bureau, in a recent address to the Special Industrial Radio Service Association at Detroit stated that the Commission's plans for eliminating the Special Industrial Radio Service may have been a bit premature and that there is at least some hope that the service will be retained in a modified form.

In answer to later questions, Mr. Arnold stated that the Commission is working to finalize the Industrial "split channel" (Docket No. 11991) as rapidly as possible, and that some announcement should be made to the public on this matter by the first of April.

Gulf Interstate Intervenes in Hearing of Docket No. 11972

James D. Cunningham, FCC Chief Hearing Examiner, has granted a petition of Gulf Interstate Gas Co. requesting intervention in the so-called "lease-maintenance" hearing. The intervention was granted after a finding that all parties to the proceeding consented to the intervention, and that good cause existed to warrant granting of the petition.

In its Petition, the Gulf Interstate Gas Company stated that "the use of the integrated radio-telephone land line communication system of AT&T results in a more efficient, swifter and safer conduct of the Company's gas transmission operation than would be otherwise possible." The Petition went on to state "the lease and maintenance of the Petitioner's mobile communication system would be covered by AT&T's Tariff F. C. C. No. 235. Unless AT&T is permitted to furnish the equipment and services provided" under existing contracts, "Petitioner's present communication system will be destroyed and other arrangements to handle this vital service would have to be made. Any decision to strike and return AT&T's Tariff, will, therefore, directly and seriously affect Petitioner in the conduct of its business."

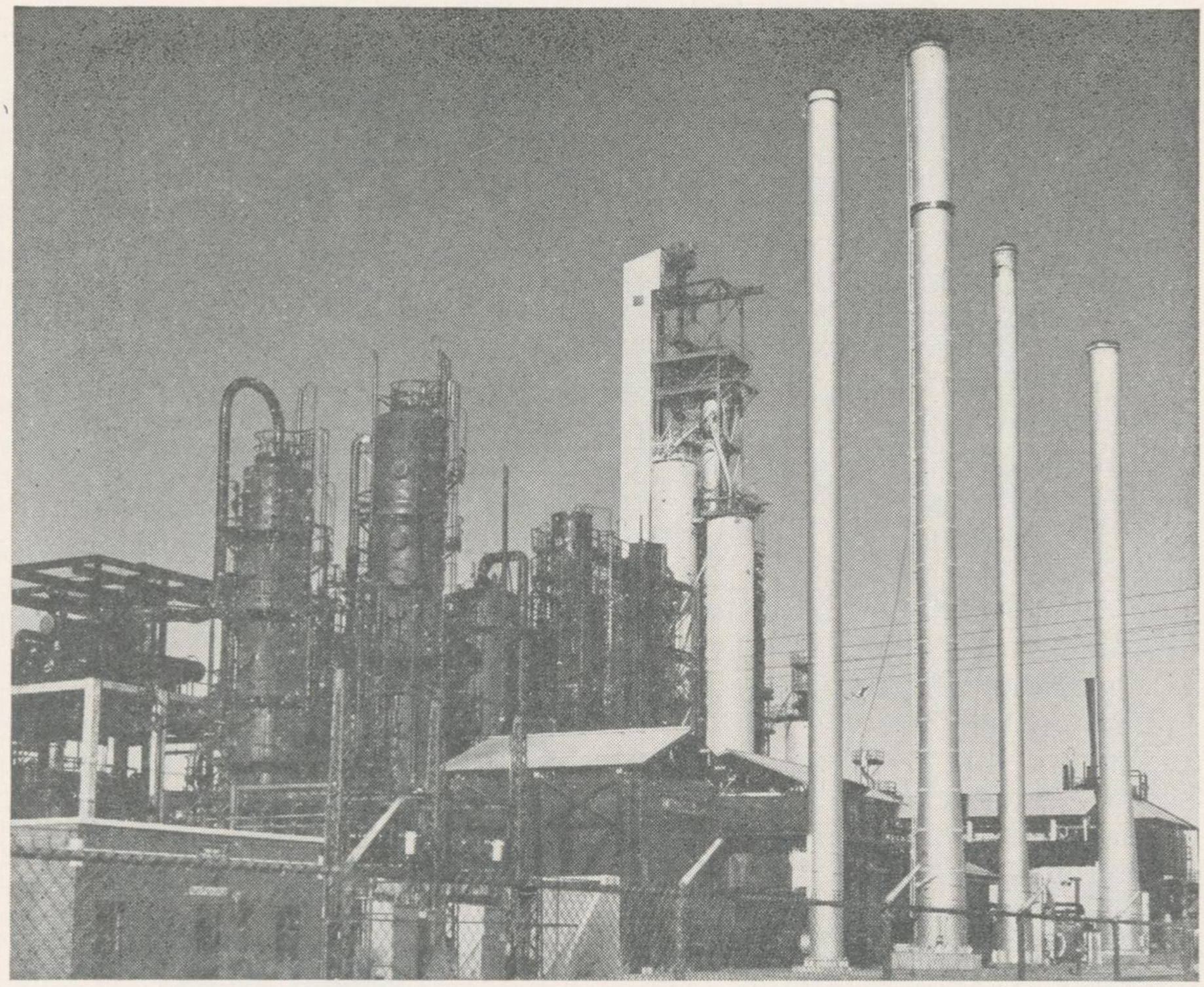
The Commission Staff has requested the American Telephone and Telegraph Company to furnish copies of the contracts between the Gulf Interestate Gas Company and the American Telephone and Telegraph Company, which covers Gulf Interstate's radio systems. It is anticipated that these contracts will be offered in evidence and that the remaining AT&T witnesses will be questioned on them as the hearing continues.

Celler to Investigate AT&T Consent Decree

Representative Emanuel Celler, Chairman of the House Judiciary Anti-Trust Sub-committee, has verified that the hearings on the 1956 Justice Department AT&T Consent Decree will probably commence during the week of March 24. The Sub-Committee has been in recess since late October. Chairman Celler observed that the Decree permitted AT&T's subsidiary Western Electric Company to continue as the sole supplier of the Bell Telephone Companies which are currently using more than 90% of all telephone equipment sold in this country. The Sub-Committee may also investigate AT&T's future plans for providing private mobile communications systems.

Developments in Docket No. 11995

By a Second Report and Order, the Federal Communications Commission finalized that portion of Docket 11995 affecting the Domestic Public Radio Service (other than



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maritime mobile) so as to "split channels" in the portions of the 150 Mc. and 450 Mc. radio frequency bands now allocated to common carriers as of February 12, 1958. At the same time, the Commission invited comments by March 17 to a proposed Rule Making which contemplates permitting a land mobile system in this Service to operate control stations on the mobile frequency of the system and the base stations to function as a repeater.

Hearing Date Set to Protest Southern New England Telephone Company Grants

A further action by the Federal Communications Commission in the case of protests against grants made by the Commission in the Power and Citizens Radio Service which involved the leasing and maintaining of equipment by the Southern New England Telephone Company was setting the date of April 15 for oral argument before the Federal Communications Commission en banc. The protestants claim this leasing and maintenance of equipment by the telephone company amounts to a violation of the 1956 Bell System-Justice Department Anti-Trust Consent Decree and the Clayton Act.

These two protests by Mobile Communications Services Station of Bridgeport, Connecticut, and Huntress Electronics, Inc., of West Hartford, Connecticut, are the first instances where specific charges of violation of the Consent Decree or Clayton Act have been presented to the Commission.

FCC Proposes Revisions to International Telecommunications Union

During the past month the Federal Communications Commission released its Second Notice of Inquiry in Docket No. 12263, which deals with proposed revisions to the Radio Regulations of the International Telecommunications Union. Although the Commission has not finished its preparation of all proposals, it has invited comments on those presently formulated in order to allow interested persons to make known their views. All of the proposals set forth in the Second Notice are for changes in Article I which deals with "definitions" in the Radio Regulations. Among the definitions revised was that of "telegram" in order to give it a more up-to-date meaning. Also new paragraph 18a was added to define "Change in Frequency Usage" to mean bringing into use of a new frequency assignment or a change of frequency assignment. A new paragraph 18b will define "Master Radio Frequency Record" as the "interim master register of frequency assignments" that was established and maintained pursuant to the provisions adopted by the Extraordinary Administrative Radio Conference, Geneva, 1951. "Master International Frequency Register" will be defined by a new paragraph 18c as the "Master register of frequency assignments established and maintained by the International Frequency Registration Board pursuant to the provisions of Articles 10 and 11 of these Regulations." Also, a new footnote was added to paragraph 57.1 (Frequency assigned to a station), to clarify the characteristics of certain complex emissions and "multiple working." Other new definitions proposed to be added were those of "Band Width Necessarily Occupied by an Emission" and "Spurious Radiation."

The Central Committee on Radio Facilities filed Comments on January 23, 1958 in response to the

Commission's "First Notice of Inquiry" in this Docket, wherein the Central Committee set forth its views on the use of the six megacycle frequencies on the Mississippi River System; International Allocation of the 88 to 108 Mc. and 470 to 890 Mc. bands; and International allocations to improve the radiolocation and navigation services.

It is anticipated that further notices inviting comments with respect to other proposed changes to the Radio Regulations will be issued shortly. In view of the necessity for preparing the United States' position at the earliest possible time, the Commission indicated that it would be unable to grant extensions of time for filing Comments to the Second Notice which are due on March 27, 1958.

Problems in Narrow-Band Conversion Discussed

Transitional problems involving the formal conversion of the country's land mobile radio services from wide-band to narrow-band operations were discussed recently by a panel sponsored by Washington Chapter of the Professional Group on Vehicular Communications. Mr. Curtis B. Plummer, FCC Safety and Special Radio Services Bureau Chief, stated that the FCC is now finishing the last stages of deciding what allocation will be made of the new channels derived from the recently adopted "narrow-band" standards. Mr. Plummer said that the FCC is interested in granting the new frequencies to new radio licensees as soon as possible, and that the equipment manufacturing industry will have to cooperate in the solution of interference problems as they develop.

Several of the radio equipment manufacturing experts participating on the panel recommended that the Commission adopt a uniform reduction in all maximum allowable deviation standards, either at a common date for all services and users, or at some early date with other necessary equipment modifications following.

California Mobiles Protest Lease-Maintenance Tariff of Pacific Telephone & Telegraph Co.

Recently five California mobile radio firms filed a petition for reconsideration with the Federal Communications Commission charging that there was an erroneous denial of a "right of hearing" as a result of the Commission's earlier actions denying the group's request for a "declaratory ruling" against the private mobile radio lease-maintenance tariff of the Pacific Telephone and Telegraph Company which had been accepted by the California Public Utilities Commission. The question of the legality of the acceptance of this Tariff by the California PUC is presently before the California Supreme Court. The petition asks that the Federal Communications Commission vacate and set aside its previous action and designate a full and fair evidentiary hearing.

In response to this "Petition for Reconstruction," the Pacific Telephone and Telegraph Company has filed a pleading in opposition to the "Petition for Reconsideration" stating that the California group's petition was without merit and should be denied, and that the requirements of "due process" had been met by the Commission in its previous action denying the group's request for a "declaratory order."

Hearings in Dockets No. 11645 and 11646 Adjourned

Among the subjects considered

during a recent meeting of Sub-Committee III-A of the United States Preparatory Committee for the International Radio Conference was the use of six-megacycle frequencies for the Maritime Mobile Service and frequency protection for radio astronomy. The matter of Maritime Mobile use of the six-megacycle frequencies was tabled pending the submission of a joint paper by the Federal Communications Commission and the Interdepartmental Radio Advisory Committee setting forth the proposed position of these two agencies with regard to the frequency allocations in the International Table of Frequency Allocations. It will be recalled that the Commission is now considering the continued use of the six-megacycle frequencies on the Mississippi River System in Docket No. 11374.

With regard to frequency protection for radio astronomy, although it appears that the consensus of opinion at the meeting was that the frequency 1420 Mc. should be left clear for such operations, no formal action was taken on radio astronomy protection, and the matter was merely noted. The same was true for single sideband operation.

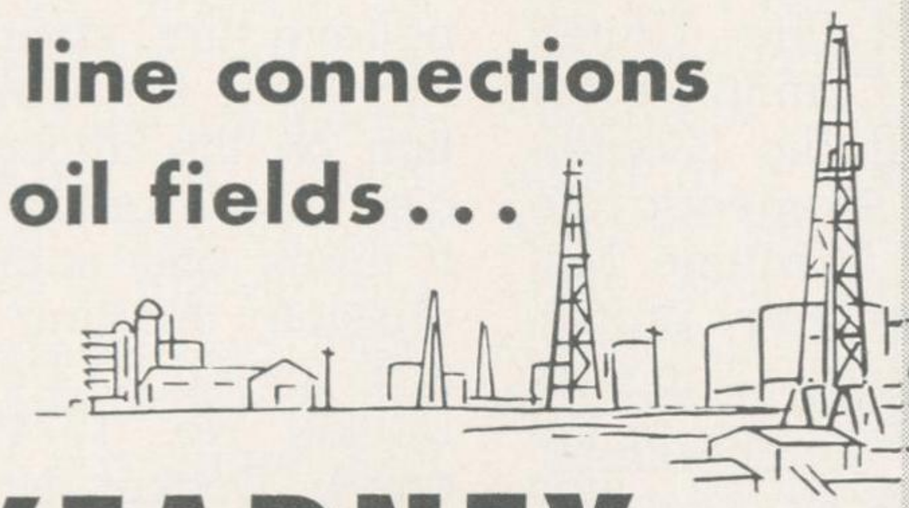
Other matters of interest which were also tabled at the meeting, pending the submission of the Commission-IRAC paper, were: radio-location service below 2000 Kc.; maritime mobile frequencies near 156 Mcs.; and the use of frequencies above 27.5 Mc. for short range communications.

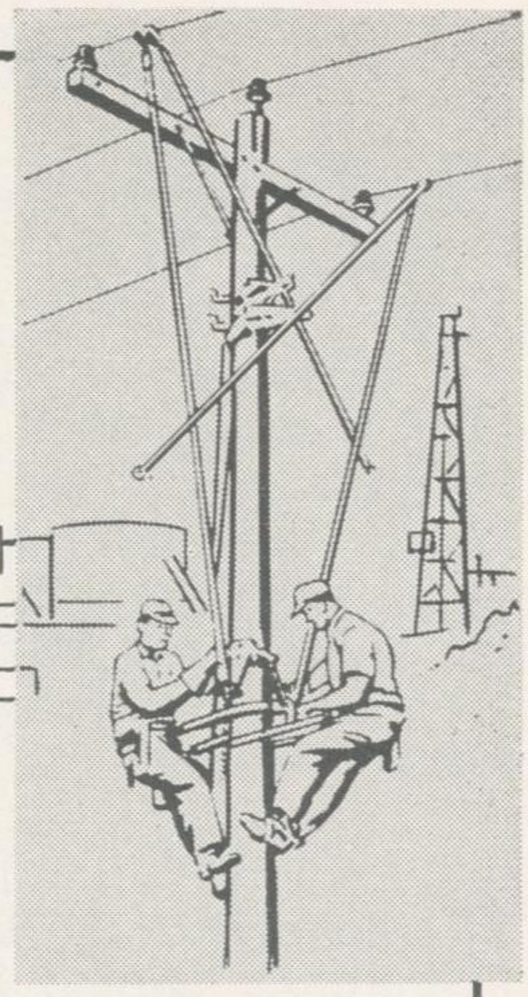
The submission of the joint Commission-IRAC paper, mentioned above, is being awaited with interest due to the fact that much of the work of Sub-Committee III-A is being held up pending the receipt of this paper. Also, some sources believe that, since this paper will represent the Commission's position on the allocation of frequencies in the entire radio spectrum, it might cast some light on Commission thinking regarding several pending Dockets, such, as Docket No. 11745 (radio astronomy); Docket No. 11866 (microwave allocations); Docket No. 11997 (reallocation in the 25 to 890 Mc. range); and, of course, Docket No. 11374.

In its Petition, the Gulf Interstate Gas Company stated that "the use of the integrated radio-telephone land line communication system of AT&T results in a more efficient, swifter and safer conduct of the Company's gas transmission operation than would be otherwise possible." The Petition went on to state "the lease and maintenance of Petitioner's mobile communication system would be covered by AT&T's Tariff FCC No. 235. Unless AT&T is permitted to furnish the equipment and services provided" under existing contracts, "Petitioner's present communication system will be destroyed and other arrangements to handle this vital service would have to be made. Any decision to strike and return AT&T's Tariff, will, therefore, directly and seriously affect Petitioner in the conduct of its business."

The Commission Staff has requested the American Telephone and Telegraph Company to furnish copies of the contracts between the Gulf Interstate Gas Company and the American Telephone and Telegraph Company, which cover Gulf Interstate's radio systems. It is anticipated that these contracts will be offered in evidence and that the remaining AT&T witnesses will be questioned

for better line connections in the oil fields . . .





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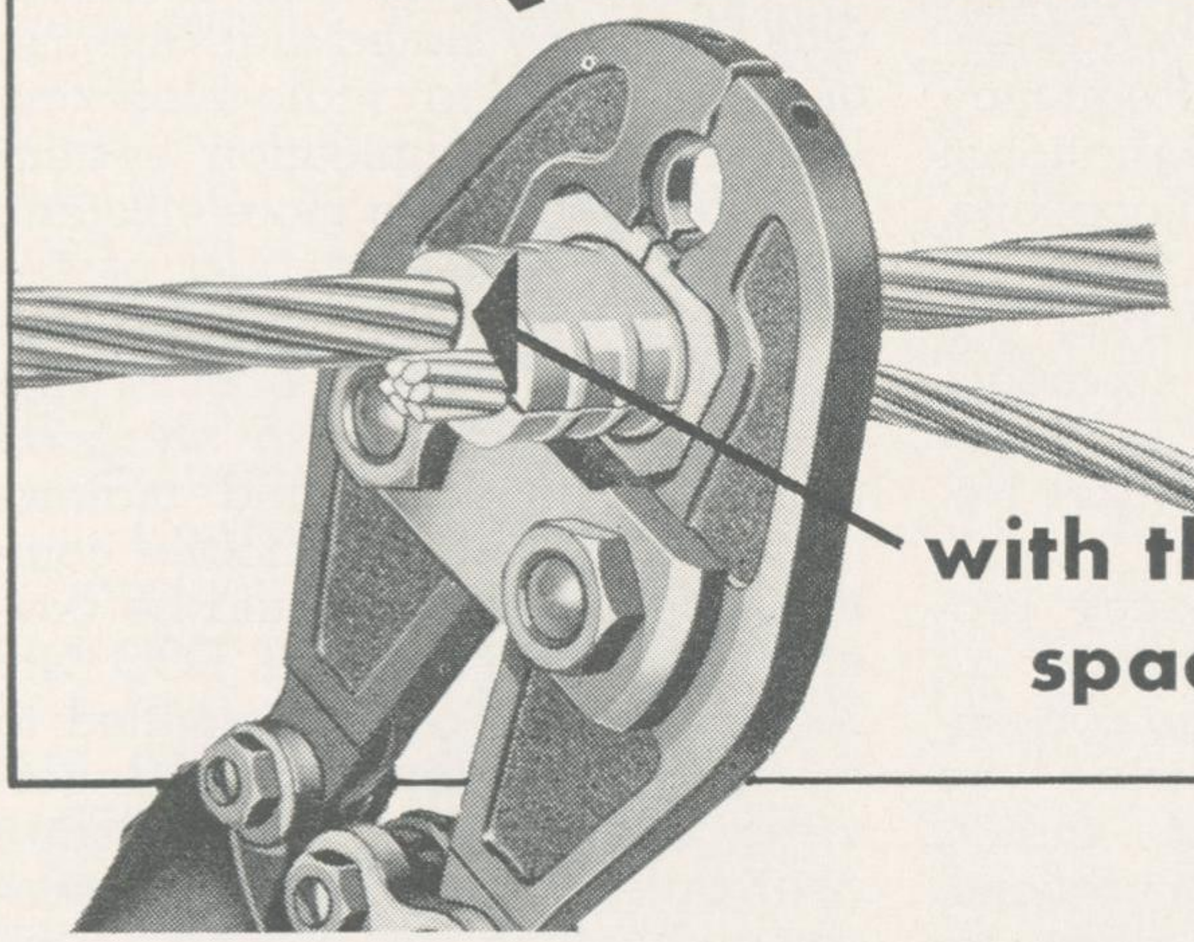

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Microwave Council Holds Annual Meeting

The Operational Fixed Microwave Council held its combined Special and Annual Meeting Wednesday, March 5, at the Lee House in Washington, D. C. Among the topics which were discussed at the meeting were the OFMC policies regarding the dissemination of microwave information, the status of Docket No. 11866 —the Microwave Hearing, lease-maintenance matters, and other developments of interest to microwave users. Mr. L. E. Ludekins of the Southern California Edison Co. was elected as the new OFMC Chairman.

ODM Stresses Importance of Common Carrier Service

The Office of Defense Mobilization in a recent letter to the Federal Communications Commission emphasized the importance of common carrier communications to national defense and urged that the need for a national system of communication in times of emergency be given full weight when allocations of the microwave spectrum are made. The letter in no way suggests a variance from the policies expressed in the Communications Act of 1934, but stresses the importance of the ability of common carriers to render service in aid of the national defense as contrasted to private systems.

It is yet uncertain as to how the Commission will treat the letter, but it is expected that some action will be forthcoming in the near future.

Commission Clarifies Aviation Rules

The Commission also finalized Rule Making in Docket No. 12270 which amended Part 9, aviation rules, to reflect more clearly the policy that aeronautical fixed station authorizations will be issued only to licensees of aeronautical enroute stations with which the proposed fixed station will be associated.

Developments in AT&T Lease-Maintenance Hearings

The Federal Communications Commission's hearing in Docket No. 11972, which is an investigation of AT&T's tariff to cover lease-maintenance of private mobile radio systems was recessed March 5 after an informal conference in which all attorneys participating in the hearing had been able to reach a conclusion which would allow the 24 Bell Company subsidiaries to be represented by a single American Telephone and Telegraph Co. witness, which was the plan originally proposed by AT&T. It appears now that it may be necessary to call an accredited spokesman from each of the 24 companies to testify on their individual positions. The hearings reconvene on March 10, and as yet only AT&T witnesses have been heard.

FCC Appointments

The Federal Communications Commission recently announced the appointment in its Office of Chief Engineer of Ralph J. Renton, formerly Assistant Chief Engineer in charge of the Technical Research Division, as Associate Chief Engineer; and of Arnold G. Skrivseth as Acting Chief of the Technical Research Division. Both of these appointees have held other important Commission Engineering posts over the past few years.

Six Mc. Frequencies Discussed by U. S. Preparatory Committee

Among the subjects considered during a recent meeting of Subcommittee III-A of the United

States Preparatory Committee for the International Radio Conference was the use of six megacycle frequencies for the Maritime Mobile Service and frequency protection for radio astronomy. The matter of Maritime Mobile use of the six megacycle frequencies was tabled pending the submission of a joint paper by the Federal Communications Commission and the Interdepartmental Radio Advisory Committee setting forth the proposed position of these two agencies with regard to the frequency allocations in the International Table of Frequency Allocations. It will be recalled that the Commission is now considering the continued use of the six megacycle frequencies on the Mississippi River System in Docket No. 11374.

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Vessel Radio Requirement Exemptions

The Federal Communications Commission, pursuant to its action of May 8, 1957, in establishing the formula for considering applications from exemption from the law requiring that vessels carrying more than six passengers for hire be equipped with radio telephone, by Report and Order exempted 35 such vessels, has conditionally exempted six others and denied 75 applications for exemption.

FCC Statistics

FCC statistics indicate that there were 1552 industrial applications filed during the month of February as contrasted to 1653 filed during the month of January. Also, the month of February saw a reduction in the average processing time for industrial grants from 46 to 44 days.

There were 266 applications in the Petroleum Radio Service received during February and 304 applications disposed of. This reduced the pending back log in the Petroleum Radio Service from 356 as of February 1, to 318 on March 1.

Stations added in the various Industrial Services during the month of February included 258 Special Industrial, 50 Power, 67 Low Power Industrial, 44 Petroleum and 16 Forest Products.

Taking into account the deletions in some of the services dur-

ing February, service totals as of March 1 were: Special Industrial — 15,766, Power — 11,045, Petroleum — 7,152, Forest Products — 1,631, Industrial Radiolocation— 212, Relay Press—127, and Motion Picture—66.

Authorizations Granted

The Federal Communications Commission issued the following authorizations in the Petroleum Radio Service: Bobby M. Burns— 1 base at Henrietta, Tex. on 48.86 Mc. (P/ML). Calco Drilling Co.— 1 base at Midland, Tex., on 49.18 Mc. (New, P/L). Buster Gardner Drilling Co., Inc.—8 base at Houma, La. (1) and New Iberia, La. (1) (New, P/L) and at temporary locations in southern Louisiana (6) (New, L) on 33.26 Mc.; 1 control at New Iberia, La. on 456.65 Mc.; 1 relay at Houma, La. on 451.65 Mc. (New, P/L); and 8 mobile on 33.26 Mc. (New, L). Hills & Hills Drilling Co.—3 base at temporary locations in Texas Panhandle (2) and near Pampa, Tex (1) (New, P/L) and 15 mobile (New, L) on 33.30 Mc. Howard Parker Co. —11 base at Almeda, Tex. (1) and at temporary locations in southeast Texas and vicinity (10) on 33.18 Mc. (P/ML). Rowan Drilling Co., Inc.—21 base at Gretna, La. (1) and at temporary locations in south Louisiana (20) (New, P/L) and 20 mobile (New, L) on 48.58 Mc. Shell Communications, Inc. — 1 base at Norco, La. on 48.70 Mc. (New, P/L). A. W. Thompson, Inc. —12 base at temporary locations within a 150-mile radius of Odessa, Tex. on 30.66 Mc. (P/). El Paso Natural Gas Co.—operational fixed units at Lovington, N. M. (3) on 1895 Mc. (P/L) and at Seligman, Ariz. (1) on 1855 Mc. (New, P). Fairway Oil Co.—1 base at Mancos, Colo. on 25.22 Mc. and 1 fixed relay at Mancos on 72.18 Mc. (P/ML). H. L. Hunt—1 base near Lucky, La. on 49.14 Mc. (P/ML). Monterey Oil Co.—1 control at Midland, Tex. on 456.05 Mc. (P/ML). Phillips Petroleum Co.— 1 base at Fairfax, Okla. on 33.38 Mc. (P/ML). Shell Communications, Inc.—9 base at Denver City, Tex. on 48.64 Mc. (1) at Williams, Kaventa, Flagstaff, Kingman, and Lukachukai, Ariz., and Amboy, Big Bear Lake, Calif. on 48.78 Mc. (P/ML). South Georgia Natural Gas Co.—1 mobile relay near Cusseta, Ga. on 33.18 Mc. (P/ML). United Gas Pipe Line Co.—1 base at Lafayette, La. on 48.78 Mc. (New, P/L). Warren Petroleum Corp.—3 base at Holliday (2) and Wichita Falls (1) in Texas on 153.35 Mc. (New, P/L). Arapahoe Pipe Line Co.—5 base at Brush (P/ML) and Fort Morgan, Colo. and Gurley, Potter, and Kimball, Neb. on 153.11 Mc. (New, P/L).

Benson-Monton-Greer Drilling Corp.—1 base at Harris Mesa, N. M., on 33.26 Mc. (P/ML); 1 control at Farmington, N. M., on 456.85 Mc.; and 1 relay at Harris Mesa, N. M., on 451.85 Mc. (P/L). Brantly Drilling Co., Inc.—1 base at Midland, Tex. on 48.74 Mc (P/L). Cities Service Oil Co.—2 base at Chico, Tex. (New, P/L) and Pampa, Tex. (P/L) and 158.43 Mc. Interstate Oil Pipe Line Co.—1 base at Plaquemine, La. on 49.10 Mc. Pan American Petroleum Corp.—1 base at Beaumont, Tex. on 153.23 Mc. (P/ML). Phillips Petroleum Co.—2 base at Jacksonville, Fla. (New, P/L) on 48.90 Mc. and at Odessa, Tex. (P/L) on 33.38 Mc. San Jacinto Drilling Co.—1 base at Houston, Tex. on 49.10 Mc. (P/ML). Shell Communications, Inc.—1 base at Sterling, Colo. on 48.58 Mc. (P/ML). Sinclair Pipe Line Co.—1 base at Rawlins, Wyo. on 49.10 Mc. (P/ML); 1 control at Sinclair, Wyo.

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on 451.55 Mc.; and 1 relay at Rawlins, Wyo. on 451.55 Mc. (New, P/L). Spradling Drilling Co. —2 base at Borger, Tex. (1) and at temporary locations in the Texas Panhandle (1) (New, P/L) and 20 mobile (New, L) on 153.23 Mc. Warren Petroleum Corp—to add 15 mobile units in Texas. American Louisiana Pipe Line Co.—1 base near Hazel, Ky. on 49.18 Mc. (P/ML). El Paso Natural Gas Co. —7 operational fixed units at Bloomfield, N. M. (4) on 2545 Mc.; Lynbrook, N. M. (2) on 2505 Mc.; and at Lindrith, N. M. (1) on 2545 Mc. (New, P). Kerr-McGee Oil Industries, Inc.—1 base at temporary location in southern Oklahoma on 48.94 Mc. Nabob Production Co. —1 base near Pampa, Tex. and 15 mobile on 48.62 Mc. (P/ML). The Ohio Oil Co.—1 base at Midland, Tex. on 48.82 Mc. (P/ML). Patton Drilling Co.—2 base at Wichita and Medicine Lodge, Kans. (New, P/L) and 10 mobile (New, I) on 48.66 Mc. Pipe Line Service Co.— 1 base at Gould City, Mich. on 48.82 Mc. (New, P/L). Southern Union Gas Co.—1 base near Lybrook, N. M. on 158.31 Mc. The Standard Oil Co.—to add 14 mobile units in Ohio. Texas Pipe Line Co.—to add 20 mobile units in Louisiana.

The Federal Communications Commission issued the following forest products grants: Washington—Darrington Radio Users Safety Council, Darrington, 1 base (New, P/L) and 25 mobile (New, L) on 158.43 Mc. Florida—Santa Rosa Lumber Co., Milton, 1 base and 15 mobile on 49.38 Mc. (New, P/L). Oregon—Albert J. Firchau, Reedsport, 1 base at temporary locations in Douglas, Coos, and Curry Counties on 49.62 Mc. (New, P/L). Oregon—Pope and Talbot, Inc., 1 base near Oakridge on 49.22 Mc. (P/ML); Publishers' Paper Co., Oregon City, 1 control at Oregon City on 456.75 Mc. (P/ML); Willamette Valley Lumber Co., Dallas, to add 18 mobile units. Texas—Champion Paper & Fibre Co., Pasadena, 10 base at temporary locations in east Texas and western Louisiana (6) Huntsville, Jasper, Cleveland, and Houston and 50 mobile on 49.46 Mc. Washington—Glen Rankin Logging Co.,

Darrington, 4 mobile on 154.57 Mc. (New, L).

The Federal Communications Commission issued the following Industrial Radiolocation grants: Wisconsin—Gaartz, Meiling & Associates, Milwaukee, 1 mobile radiopositioning unit 2950 to 3200 Mc. within the U. S. (New, L). California—Engineering Surveys Co., Sacramento, 1 mobile radiopositioning unit on 2950 to 3200 Mc. (New, L). Illinois—John F. Meissner Engineers, Inc., Chicago, 1 mobile at temporary locations in U. S. and possessions on 2950 to 3200 Mc. (New, L).

RTCM To Meet In Philadelphia, To Hear Papers of Interest

The Radio Technical Commission for Marine Services (RTCM) will hold its spring National Assembly at the Benjamin Franklin Hotel in Philadelphia on May 13 and 14, 1958. Since 1947, this group has served as an organization in which government and industry could cooperate to promote the development and application of electronic equipment in the field of marine communications, navigation and safety. Its 124 member organizations will send representatives from government agencies and from the armed forces, as well as from electronic manufacturers and from shipping companies to hear a program which contains papers of local, national and international interest. Mr. H. G. Schad, Vice President of the Atlantic Refining Company and Chairman of the Executive Committee for the Improvement and Development of the Delaware Port Area, will introduce the first day's technical session. This session will feature the "Navaid" program being sponsored by the Committee to promote the use of a simple VHF bridge-to-bridge radiotelephone system to increase the safety of navigation in the congested waters of the Delaware River and Bay.

On the second day of the meeting the morning session will highlight the international aspects of marine communications. A series of papers will describe the problems which will face the U. S. marine interests in the various international telecommunications conferences during the next few years.

The final technical session on the afternoon of May 14 will be devoted to the subject of recent developments in marine navigation aids. The merits of the new "True Motion" radar will be discussed, and the possible marine applications of inertial guidance will be described.

The RTCM Assembly will conclude on May 15 with an inspection of Delaware River port facilities.

Albert Haselman To Head Prodelin Sales

Albert Haselman has been named General Sales Manager of Prodelin, Inc., manufacturer of antennas and transmission line systems at Kearny, N. J.

I. T. & T. Expands

Ground will be broken in May for a modern, air-conditioned plant to be built on a 15-acre site near Roanoke, Va., by International Telephone and Telegraph Corporation to supplement its tube manufacturing facilities.

Comments From Your New Equipment Committee

APRIL, 1958

W. H. Craig, Chairman PIEA New Equipment Committee
P. O. Box 1407, Shreveport 92, La.

New Type EVA Mercury Vapor Fixture

Crouse-Hinds Company has announced a new Type EVA explosion-proof fixture for use with mercury vapor lamps. (See Photo No. 1.) Particularly suited for high-bay applications, the new fixture has increased lamp life, materially reducing relamping costs, and gives greater lumens per watt.

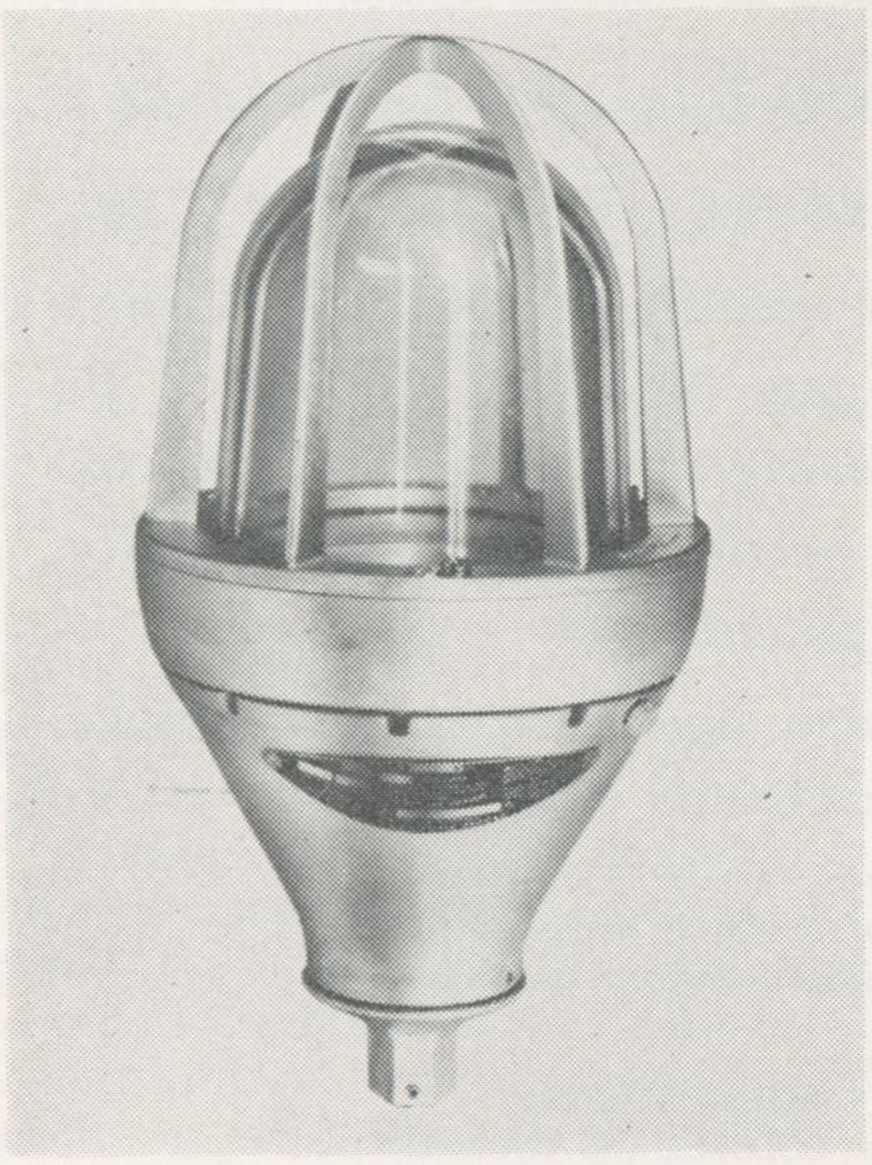


Photo No. 1

The fixture will take 250-watt Type BT-28 and 400-watt Type BT-37 mercury vapor lamps. The 250-watt size is for Class I, Groups C and D, while the 400-watt is for Class I, Group D.

Standard 300-500-watt size EV reflectors are used. Ballasts used with mercury vapor lamps should be located outside the hazardous area.

For further information on the new fixture, write on company letterhead to Crouse-Hinds Company, Wolf and Seventh North Streets, Syracuse, New York.

High Temperature Wire Markers

Teflon wire markers for high temperatures and high frequency application are now available from the E C P Corporation, 4726 Superior Avenue, Cleveland 3, Ohio. (See Photo No. 2). Teflon is extruded from DuPont tetrafluoroethylene resin and converted by The E C P Corporation into markers to identify circuits in complex wiring systems where resistance to heat and chemicals is a factor.

The new markers when exposed to temperatures up to 260° C or 500° F will not melt, flow or disintegrate. High impact strength, toughness, flexibility, and elasticity were easily maintained throughout the heat range. The markers are non-flammable and resist damage, attack and corrosion from all chemicals and sol-

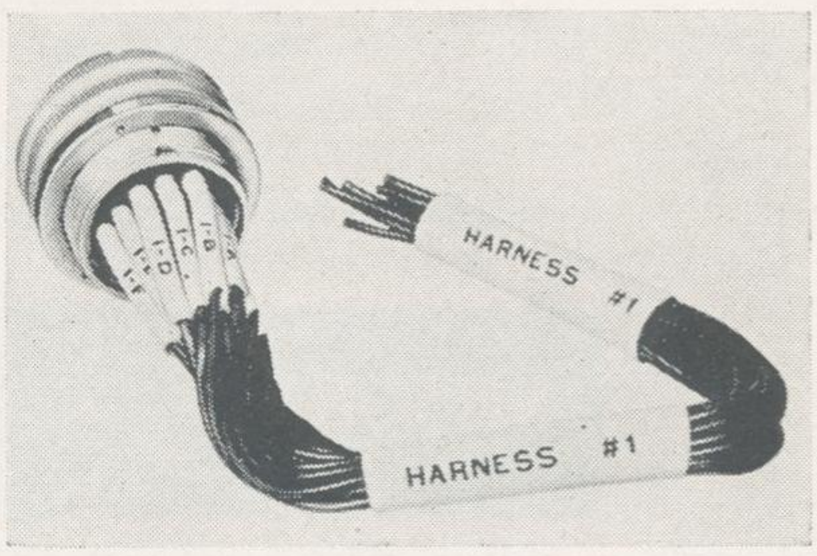
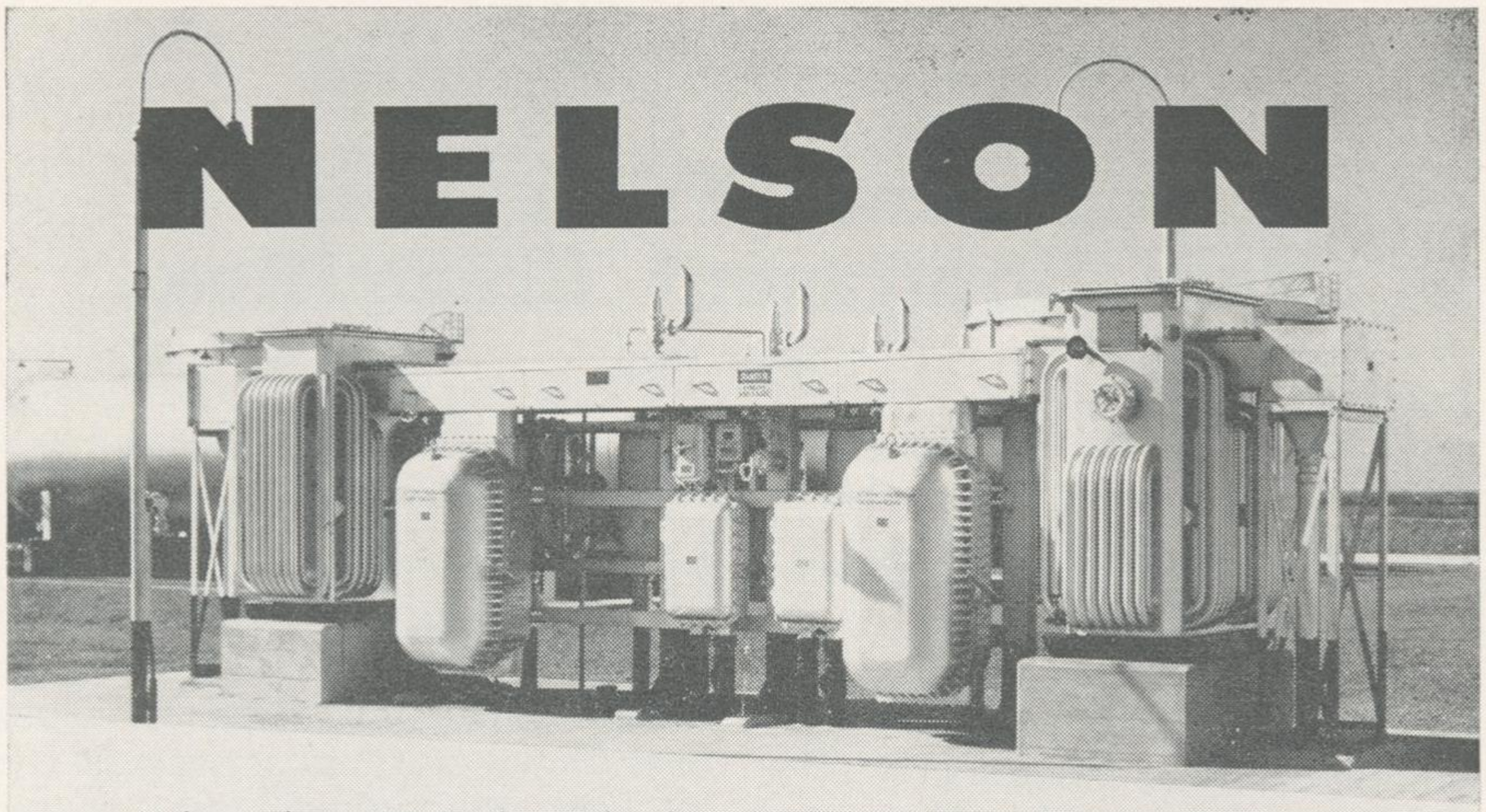


Photo No. 2



Nelson Class 497 Steel Switchrack with Explosion-Proof Network Protectors, Current Limiters, and Weatherproof Bus Duct installed at a Petroleum Refinery in Class 1, Group D, Division 2, hazardous location.

THE *dependable name for electrical control equipment in the petroleum industry.*

When control equipment is specified for Class 1, Group D, hazardous locations investigate NELSON . . . first. Be guided by 20 years of engineering and manufacturing experience that assures you of getting the highest quality, easiest installed electrical equipment.

For safe, dependable products, and personalized service, call your **NELSON** representative.

Among the explosion-proof products designed for Class 1, Group D, hazardous locations manufactured by NELSON are:

- CIRCUIT BREAKERS
- PANELBOARDS
- CONTROL STATIONS
- PIPE LINE SAMPLERS
- SWITCHRACKS
- MOTOR STARTERS
- CONTROL and TRANSFER SWITCHES
- JUNCTION BOXES
- HIGH-VOLTAGE MOTOR STARTERS

A major source of Electrical Control Equipment for Industry

NELSON *Electric* MANUFACTURING CO.
TULSA, OKLAHOMA

vents, except molten alkali metals and fluorine, at elevated temperatures and pressures. They are inert to all fungi growths.

E C P high temperature wire markers fit B & S gauge wires in standard size wall thickness and tubing sizes. Markers in other tubing sizes and wall thicknesses may be obtained on special order.

Identifications are placed on each marker at the E C P factory, in accordance with customer request. The code markings are in numerals, letters or symbols. Markers may be purchased in tube lengths or in spools for fast, easy application. The electrician merely snips off a portion of the tubing, on which the code appears and slips it on the wire to identify the circuit, as he goes along. E C P also sells individual markers that are coded, pre-cut and boxed in any quantity desired. The markers may be used to identify thermoplastic wire circuits and various devices such as resistors, capacitors, plugs, harnesses, etc.

Literature, prices and specific application information are available from The E C P Corporation.

New Development From Prodelin

Prodelin Inc. has announced a new broadband semi-flexible, air dielectric transmission line and companion connectors to be marketed under the registered trade name of Spir-O-line. (See Photo No. 3.) For the first time the flexibility and high power features typical of solid dielectric lines are provided in an air dielectric line while minimum attenuation and the low VSWR characteristics of rigid air dielectric line are retained.

Spir-O-line features a unique dielectric supporting structure between the aluminum outer conductor and the copper inner conductor. It employs high density, 100° C, low-loss polyethylene tubing under uniform radial compression to provide maximum air space with no direct air path between conductors. This construction permits a voltage rating increase of approximately 20% over equivalent size semi-flexible lines. The lower attenuation of Spir-O-line permits higher average power ratings.

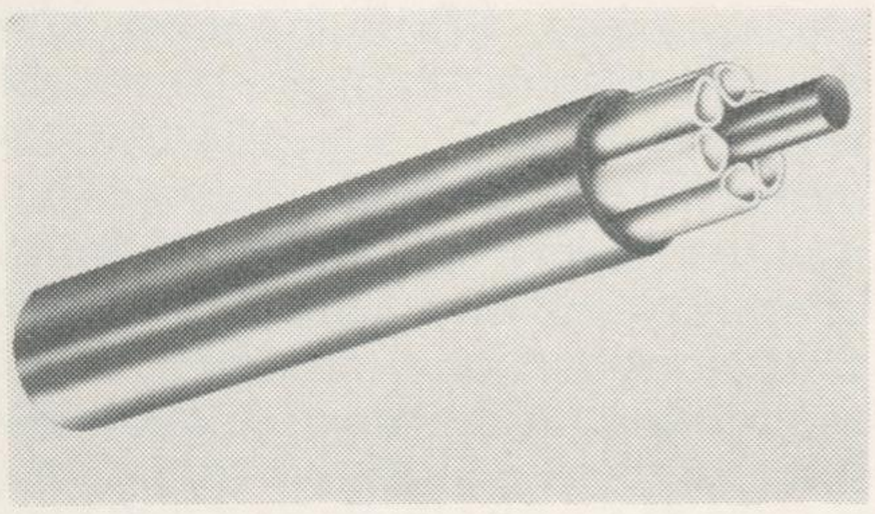


Photo No. 3

Another advantage of this new dielectric structure is the fact that continuous and intimate line contact with the inner conductor is maintained throughout with a minimum amount of tangential contact at the center conductor surface.

The avoidance of dielectric discontinuities typical in conventional transmission lines provides high efficiency and low VSWR. The manufacturing technique creates firm, concentric support for the inner conductor and keeps the dielectric structure under uniform stress, even on bends, to provide a broadband, low VSWR cable.

Prodelin has also eliminated the necessity for metalic or dielectric joints between antenna and transmitter terminals by supplying Spir-O-line in continuous lengths.

Spir-O-line cable provides a high degree of crush resistance because of the natural strength of its aluminum-alloy outer conductor and the radial support of the di-

electric tubes. While the outer conductor is also highly corrosion resistant, Prodelin supplies Spir-O-line with an optional non-contaminating jacket for such extreme conditions as direct burial, salt air, or underwater environments.

High temperature service for use up to 250° C is offered in Spir-O-line Hi-Temp cable where the dielectric structure is made of Teflon.

Spir-O-line transmission lines terminate in standard EIA flanges and other specified dimensions. Spir-O-line cables have broadband characteristics and are usable up to the following cut-off frequencies: ⅜" to 15 Kmc/s; ½" to 10 Kmc/s; ⅞" to 5 Kcm/s; 1⅝" to 2.8 Kmc/s; and 3⅛" to 1.5 Kmc/s.

Inquiries regarding prices and specifications on Spir-O-line cables and connectors should be directed to the manufacturer—Prodelin Inc., Dept. P-9, 307 Bergen Avenue, Kearny, N. J.

Audio Oscillator Wayne Kerr Type S-121

Wayne Kerr Instruments announces the availability of a new Audio Oscillator, Type S-121. (See Photo No. 4.) The Audio Oscillator, Type S-121, is a precision instrument providing a stable, controlled signal in the frequency range of 10 cps to 120 kc. The oscillator offers accuracy and stability normally found in signal generators.

The oscillator either selects major intervals of this frequency range, or for accurate measurements of short cut-off filters and resonance curves, provides a continuous fine control of frequency on an open horizontal scale. This feature is extremely convenient, since in most routine audio frequency work, response curves are plotted on a logarithmic frequency scale involving only major intervals. The S-121 Audio Oscillator combines both these functions quite simply.

The frequency setting is accomplished by four decades covering the range of 10cps to 120 kc. to an accuracy of 1%. In each range, there are ten fixed frequencies selected by a switch with a continuously variable control with a logarithmic scale interpolating between them. The interpolating control gives a fine adjustment of frequency and an open scale at any point in the range whenever it is required to measure sharp resonances or rapidly changing responses.

Photo No. 4

There is an accurate 600 ohm output either terminated or unterminated with a step attenuator covering the range of +10 to —70 dB steps on a reference level of 1mW. There is also a 5,000 ohm output with a continuously variable control of voltage of 0-30 V in five decade ranges. The stability of the reference level is constant to within 0.2 dB over the whole frequency range. The waveform is pure with a low hum level (—60 dB down minimum). The second harmonic is 50 dB down on the fundamental, and the third is 60 dB down.

Further information on the new Wayne Kerr Audio Oscillator, Type S-121, is available from Wayne Kerr Instruments, Post Office Box 801, Philadelphia 5, Pennsylvania.

Miniature Relay by Automatic Electric

A new miniature telephone-type relay which, while weighing only two to three ounces, incorporates the best of the high quality and long life features of its famous Class B Relay predecessor, has been announced by Automatic Electric Company, Northlake, Illinois. (See Photo No. 5.) From 100 million to 200 million operations can be expected during the service life of this relay.

Known as the Class E Relay, this unit—the result of more than ten years of laboratory work and extensive testing—is intended for applications where savings in space and weight are desirable, but quality must not be sacrificed. This relay can be used advantageously in portable electrical circuit analyzers, data processing equipment, and similar applications where savings in weight, space, and floor loading are important.

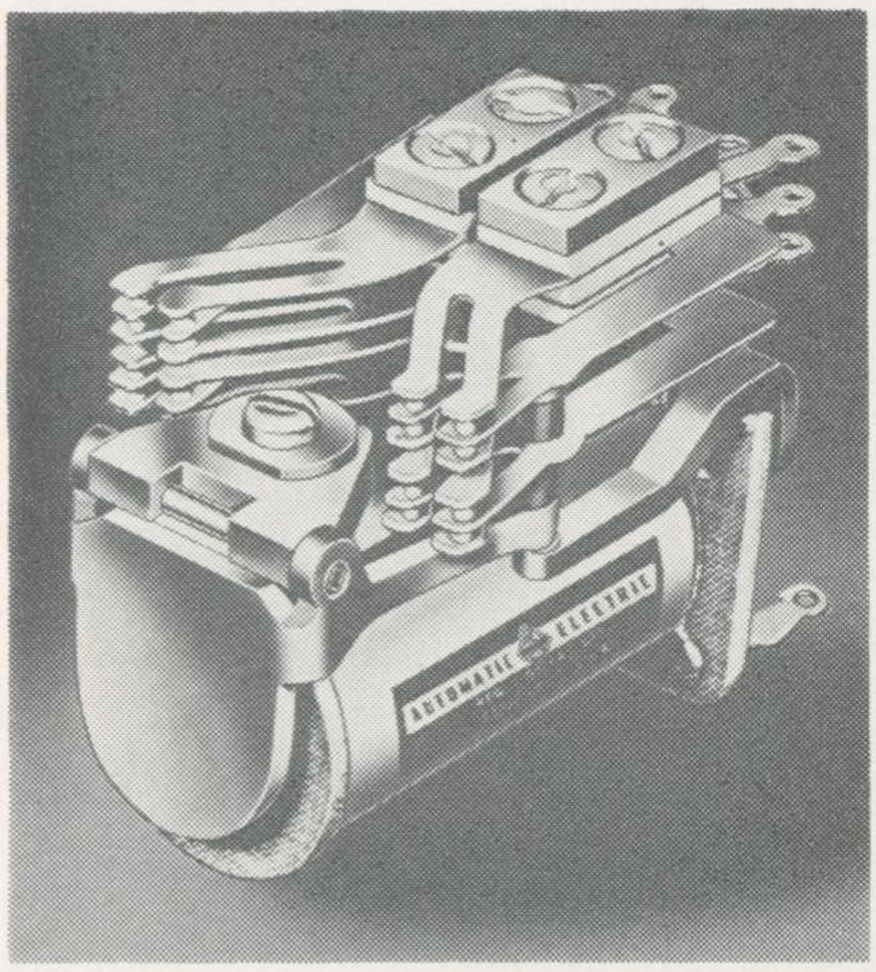


Photo No. 5

One of the service-life-lengthening features of this relay is Automatic Electric's exclusive armature bearing assembly which employs a heavy duty stainless steel pin turning in a sintered-metal, lubrication-retaining type of bearing yoke. A unique square-staked bearing pin remains tight in the armature throughout the longer service life.

Heavy thickness armature arms, previously available in larger relays only, will not "sag off" in service. Thus, the arms retain their proper stroke, even under heavy loading, or severe operating conditions.

Broken and worn out backstops are eliminated by the basic design of the Class E Relay. A portion of the heelpiece has been formed to provide a permanent backstop. A non-magnetic residual backstop-button presents a resting surface for the armature arms in the unoperated position.

Another feature taken from the Class B Relay is the use of sturdy stock in the heelpiece to insure stability of adjustment. In addition, the extra thickness makes the relay slightly more sensitive—a characteristic which improves contact pressure per given amount of power consumed by the coil.

Reliability of this relay is further assured by the palladium-silver contacts, themselves. The make and break springs and the mating armature springs are all bifurcated. Extra spring width is designed into the buffer cup area to improve service life by preventing fatigue at this point.

Ease of installation wiring of this relay has been assured by improved terminal spacing, which

makes all terminal rows readily accessible for wiring.

This relay has been designed for up to 150V DC and 220V AC operating voltages. Dimensions of the unit are: length, 2¼"; width, 1⅛"; and height, varying from 1-13/64" for a unit with a minimum of two springs, to 1-23/32" when 10 springs are employed.

This relay is available in the following series: EQA (quick acting); ESO (slow-operate); ESR (slow-release); ESA (slow-acting, slow-operate and slow-release); EFA (alternating current); and EMS (snap-action contacts). Various mountings include octal-plug type, eight and 20 pin, and strip mounting with or without dust cover. Relays with dust covers have a maximum of 10 springs per pileup. The relay is also available in a hermetically sealed unit with a maximum of six springs per pileup.

Program Time Switch With Built-In "Tilt" Tabs

A program time switch, the Model 8001, with built-in tilting tabs for setting programs, has been announced by Tork Time Controls, Inc., Mount Vernon, N. Y. (See Photo No. 6.) The new switch offers maximum adjustability in setting up intermittent

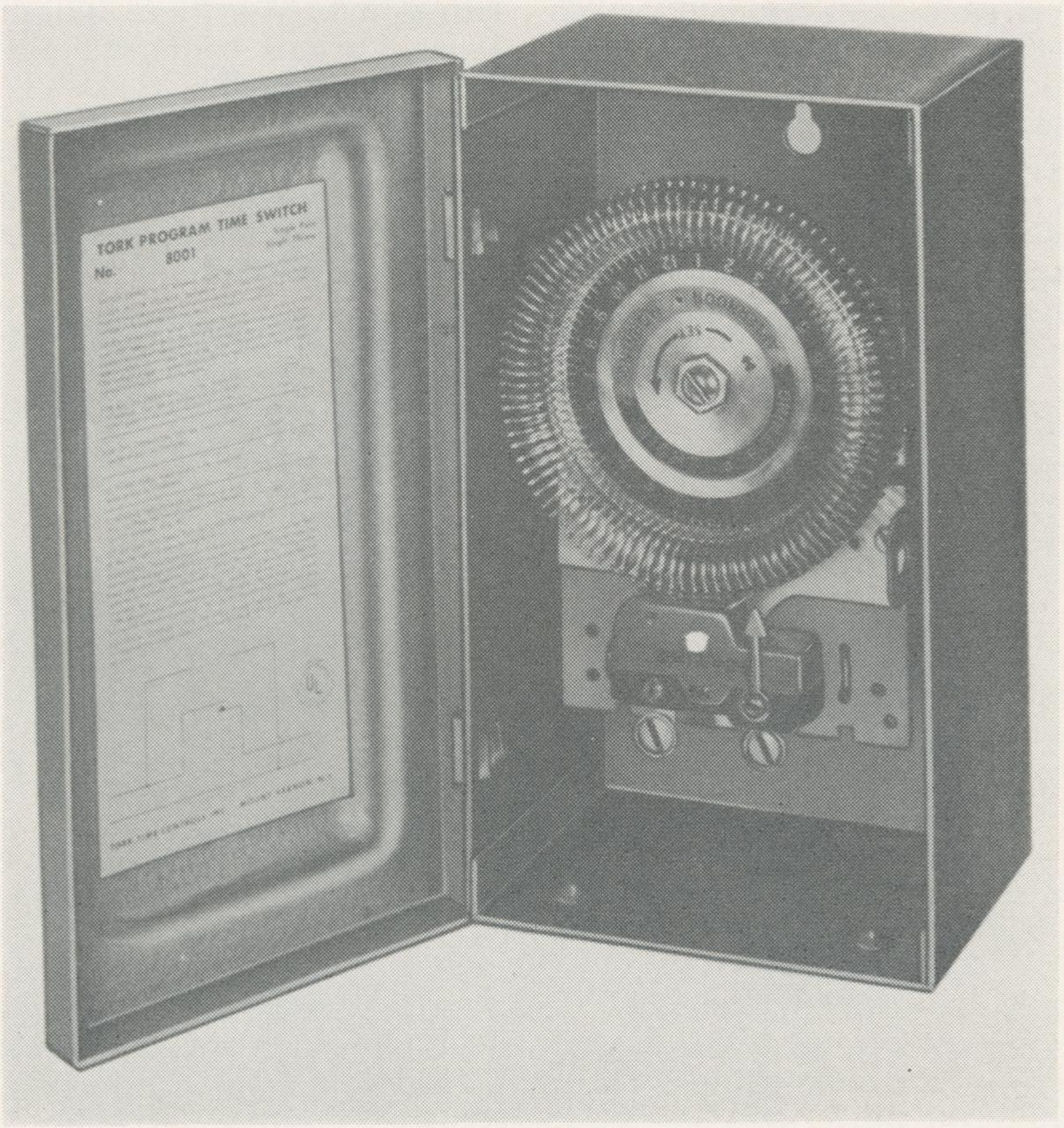


Photo No. 6

pumping operations, with maximum ease of setting with the new type tabs.

The 8001's 24-hour dial has 96 tabs, attached to its perimeter. Each provides for a 15-minute operation, so that from 1 to 48 On-Off operations per day can be scheduled. Minimum On or Off time is 15 minutes, maximum is 23 hours 45 minutes. A wide variety of On-Off combinations are possible. The unit is also equipped with a Skip-A-Day wheel, to allow programming on selected days of the week.

The 8001 is available in models for 120 volt, 208-240 volt, and 440 volt usage. No exposed gears, it has a simple but rugged switch conservatively rated at 10 amperes. The heavy duty timing motor, operating at from —60° to +160° F., assures accurate performance and extra long life in extreme heat or cold. Raintight and All-Weather Dust Tight cases, often essential in oil field installations, are available.

Further information on the Model 8001, as well as consultation on the use of time switches for intermittent pumping and automatic control operations in the oil industry, may be had without obligation. Inquiries should be directed to Industrial Information Division, Tork Time Controls, Inc., Mount Vernon, New York.

Epoxy Encapsulated Chokes— High Temperature 125° C

A new family of epoxy encapsulated chokes, covering a wide range of inductances from 0.1 uh to 200.0 M. H., has just been brought out by Waters Manufacturing, Inc., Wayland, Massachusetts. Various configurations are available. (See Photo No. 7.) One popular type features a flat side for mounting on printed wiring boards with axial leads. The flat side also provides an index surface for automation.

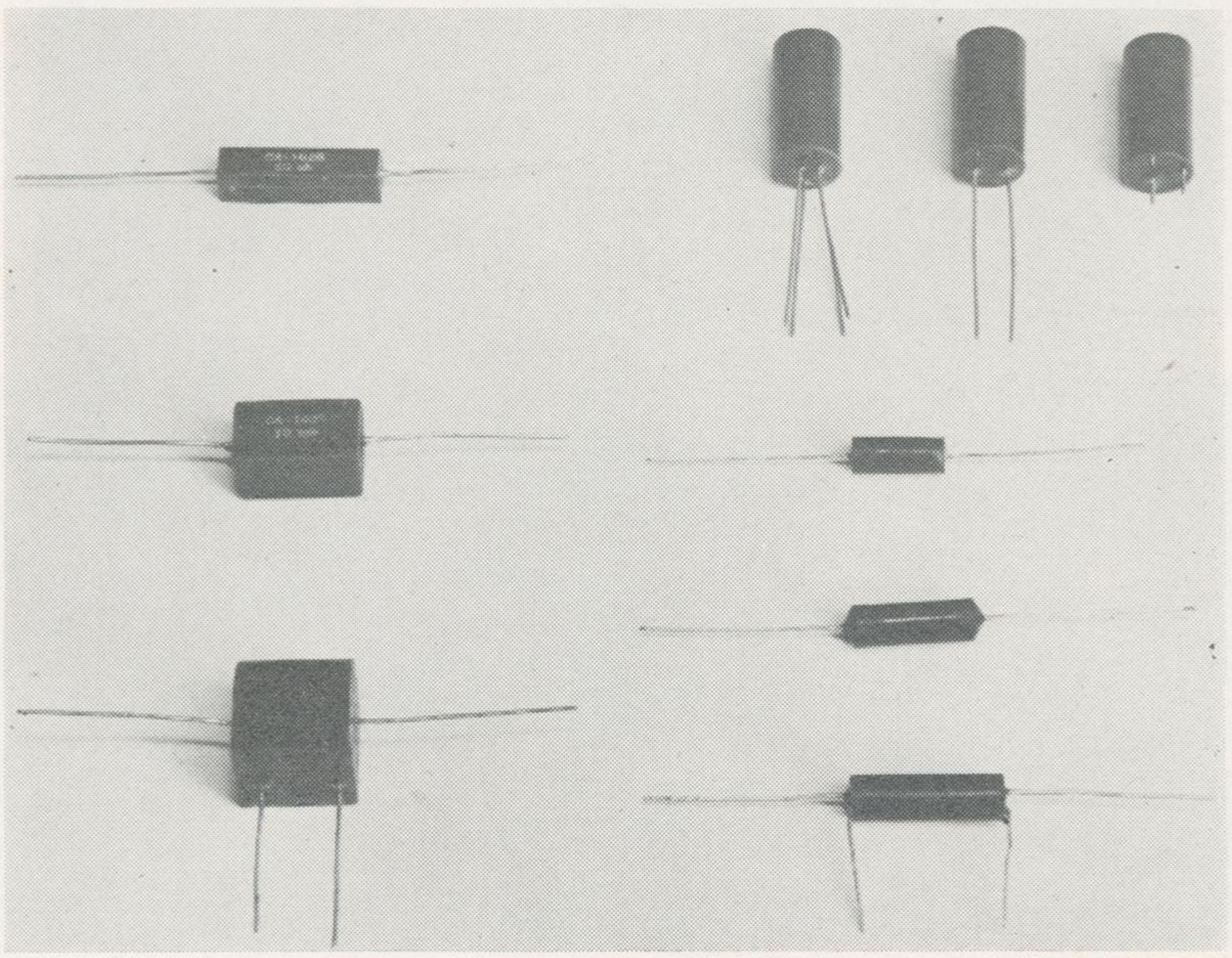


Photo No. 7

For heavier components, additional leads are provided for mechanically securing encapsulated chokes to printed boards, to meet extreme vibration and shock requirements.

Also available is a tubular style, with leads extending from one end for printed wiring boards or conventional circuit applications with high temperature requirements. In addition to the above, there are available shielded encapsulated chokes, which mount by two 6-32 spade bolts.

Thermostatically-Protected Transistor-Powered Mobile Radio

General Electric Company has announced its thermostatically-protected transistor-powered 100-watt mobile radio.

The new equipment is designed with automatic cut-off and re-set functions which keep the transistor power supply safe against abuse due to heat caused by overload, duty cycle and environmental conditions.

The development was disclosed by R. E. Hansen, manager of Standard Mobile Engineering for the General Electric Communication Products Department. Hansen said the latest developments in transistor technology make it possible for General Electric to extend its line of transistor-powered equipment into the higher power ranges at this time.

The highest power previously available in the transistor-powered category was 60-watts, with General Electric as the industry's sole manufacturer of units in this wattage. Now, Hansen said, all G-E Progress Line mobile equipment currently offered for sale can be supplied with transistor power.

The new General Electric 100-watt mobile is equipped with a die-cast heat sink of special design. Made of brushed aluminum, the sink resembles a waffle grid and serves as a total enclosure for power transistors.

Engineered for both appearance and functional performance, the equipment provides maximum dissipation of heat from transistors and minimum heat absorption.

The bright aluminum surface of the sink results in a high degree of reflectivity of radiant heat from external sources as well as adding to the style of the radio unit.

According to Hansen, G-E engineering tests showed that the waffle-grid type of heat sink was more versatile than wafer-fin designs. He explained that if a mobile radio is mounted on its side in a vehicle rather than upright, as some customers prefer, the grid design still provides a chimney effect for heat elimination. In this type of application, Hansen said, fin designs are not as efficient because fins transposed into a horizontal position serve as a damper to heat elimination.

Hansen said G-E's new automatic cut-off and heat sink design contribute to the goal of transistor power supplies—increasing the mobile unit's reliability and correspondingly reducing "out of service" time.

With the introduction of its first 100-watt unit, G-E now is marketing 30, 60 or 100 watt transistor powered mobiles in 25-54 mc; 25 or 50 watts in 144-174 mc; and 15 watts in 450-470 mc.

Motorola Announces 100 Watt Mobile Radio With Transistorized Power Supply

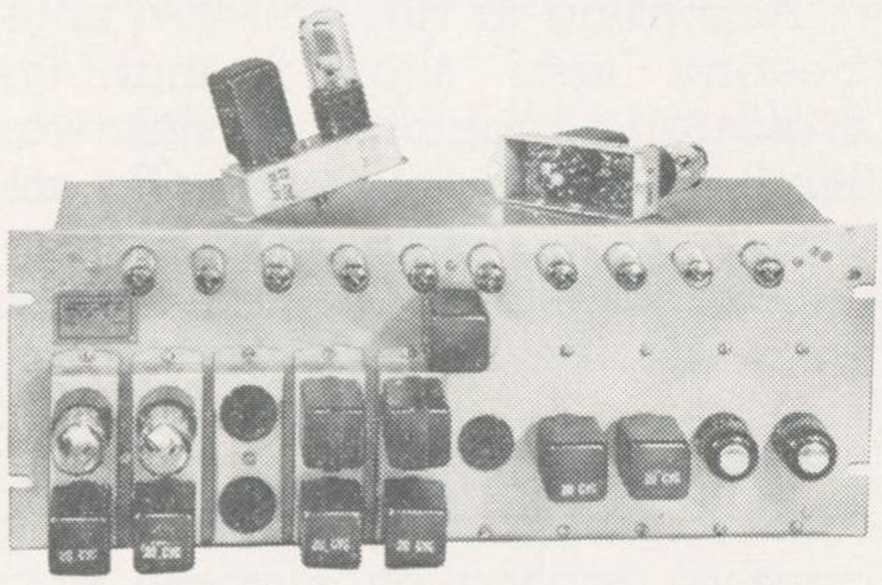
The most powerful two-way mobile radio used is now available with a fully transistorized power supply. (See Photo No. 8.) Motorola has announced the 100-watt

Depend on **WRRS** For Your Needs

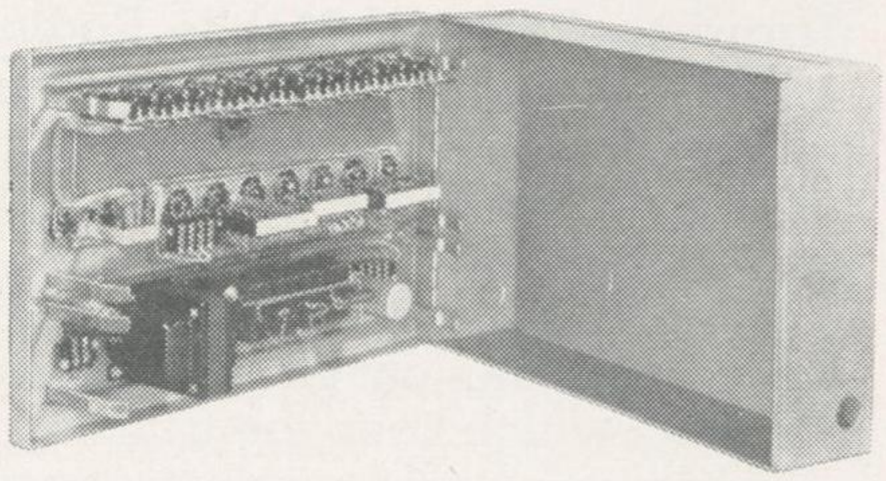
New!

CDX-80 Electronic Telephone Concentration System

TERMINATES CIRCUITS without rewiring or alterations



CDX-80RP Relay Panel and various plug-in units.

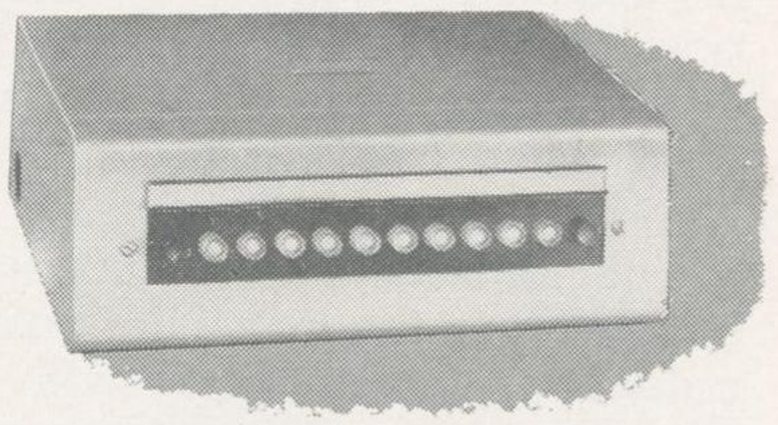


CDX-80RP Relay Panel and CDX-85 Power Supply in wall cabinet. Shown in open position.

reduces costs! improves reliability! simplifies maintenance!

Principal feature of this system is the utilization of a reliable Cold Cathode Tube Circuit for all types of circuit termination. Circuits are connected to receptacles. By means of simple plug-in units any circuit can terminate local telephone or talk-back speaker circuits, or selector operated magneto, magneto-delay, common battery or code ringing telephone circuits. Plug-in units can be changed as desired—basic panel never becomes obsolete. Ten lines are provided on the basic panel, but it can be used with less or can be increased by use of multiple units.

The power supply panel contains all necessary equipment for furnishing the entire power requirements of one or two 10-line panels from 115 volts, 60 cycles.



CDX-80SC Switching Cabinet.

Write for complete information

WESTERN RAILROAD SUPPLY COMPANY

Division of Western Industries, Inc.

2428 South Ashland Avenue, Chicago 8, Illinois

8380

unit as part of an expansion of its "T-Power" radio line.

The first transistor powered radios were placed on the market by Motorola in mid-1957. These were 20-25 watt sets. The new "T-Power" equipment now available includes 60 watt radiophones in the 144-174 Mc band and 50 and 100 watt units in the 25-45 Mc band. Four transistors are used in the 100 watt radio to replace both the vibrator and the dynamotor.

Transistors are characterized by their exceptionally long trouble-free life, providing the user increased reliability and efficiency over extended periods with minimum maintenance.

The new Motorola "T-Power" equipment is distinguished by black finned, highly effective heat sinks which conduct heat from the externally mounted transistors for optimum operation.

The transistorization of the power supply has reduced the size and weight of the 50 watt low frequency unit, enabling mounting in a 10 inch wide housing that can be either dash or trunk mounted. Formerly this type radio was available only in the trunk mounted 15 inch wide housing. Similarly its weight has been reduced 36%—from 74 to 47 pounds. For its size, this is the most powerful two-way mobile radio available. Transistorization has also increased power supply efficiency, reducing transmitter primary power consumption in all models.

Motorola "T-Power" radiophones can be operated from any 12 volt primary power source with either positive or negative ground. Models are available with a conventional noise squelch or with Motorola's exclusive "Dual Squelch" "Private Line" circuit which eliminates all co-channel nuisance messages as well as other interference.

Further information can be obtained by writing to Motorola Communications & Electronics, Inc., Dept. T, 4501 W. Augusta Blvd., Chicago 51, Ill.

Photo No. 8

Accident Report Turned In By An Atlantic Pipe Line Microphone Technician

Place: Ridge Road in front of Flat Top Microwave Station.

Date and Time: March 20, 1958—00:45 A. M.

Called out by Dispatcher 00:45 A. M. March 20, 1958, to perform emergency microwave maintenance. (Sinclair circuit noisy beyond use.) Proceeded to Flat Top microwave station in snow storm, using chains was able to force way through some 12 inches of fresh snow over several downed telephone lines, couple power lines and small trees and branches. About a quarter mile from Flat Top station skidded off road onto soft shoulder and mired to axle depth in mud. Abandoned car, hiked through some 14-15 inches of snow to microwave building. The station was on emergency power, power line having parted down road. Lifted off York wire line by remote control, clearing circuit. Spent night in radio building.

At about 10:00 next morning contacted farmer living about half mile from Flat Top, who had large tractor, about pulling car out. Snow depth now about 20 inches. By repeated passes was able to break trail to car. After good deal of shoveling was able to get tractor down to road for traction. With tractor hitched to rear of car, after number attempts with car in reverse and tractor pulling, finally came clear, but the moment my wheels and chains secured traction I had backed into the tractor tow bar, pushing in the right side of my rear trunk lid and also the right rear fender below the tail light. Farmer then used his tractor to plow through to Hershey road, a distance of about one mile. He then came back and towed me out, since I was still unable to navigate due to the wet snow building up under car, causing loss of traction. For this service he accepted $5. After an hour, six miles and a good deal of work on the business end of a shovel I reached home. Called Supervisor: reported accident.

Caplan Named Manager, RCA Communications Products Department

Norman Caplan has been appointed Manager, Communications Products Department, Telecommunications Division, Radio Corporation of America.

Formerly Manager, Mobile Products Department of Bendix Aviation Corporation, Mr. Caplan, in his new position, will be responsible for RCA's engineering, manufacturing, and marketing activities in the fields of mobile, microwave, and marine communications. He succeeds C. M. Lewis, who was recently named Manager, Marketing Plans, RCA Telecommunications Division.

The church usher was instructing his youthful successor in the details of his office. "And remember, my boy, that we have nothing but good, kind Christians in this church—until you try to put someone else in their pew."

* * *

One of the girls in the office is borrowing money 'til next payday. Seems that she bought a new Dior dress last week and now she's flat busted.

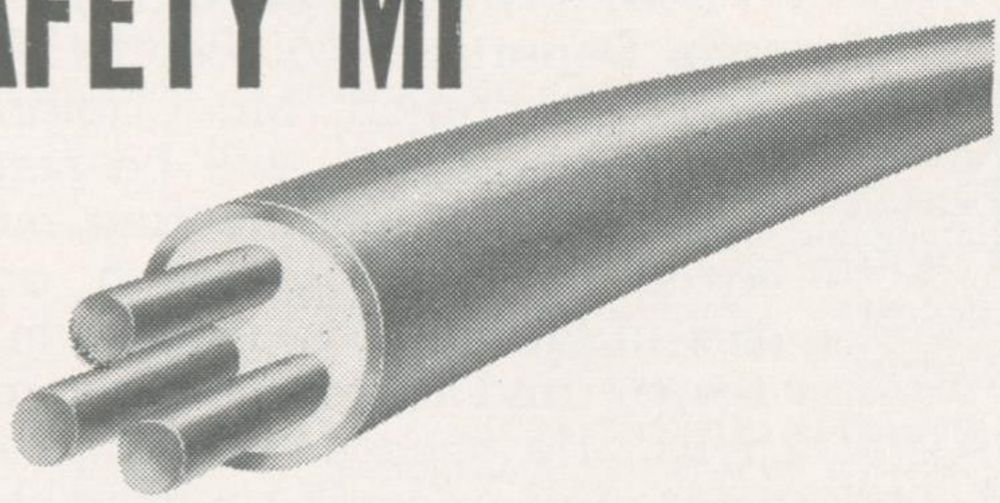
QUALITY BUILT:

MANUFACTURED and TESTED ACCORDING TO THE HIGH STANDARDS MAINTAINED FOR ALL GENERAL CABLE PRODUCTS.

GENCATROL

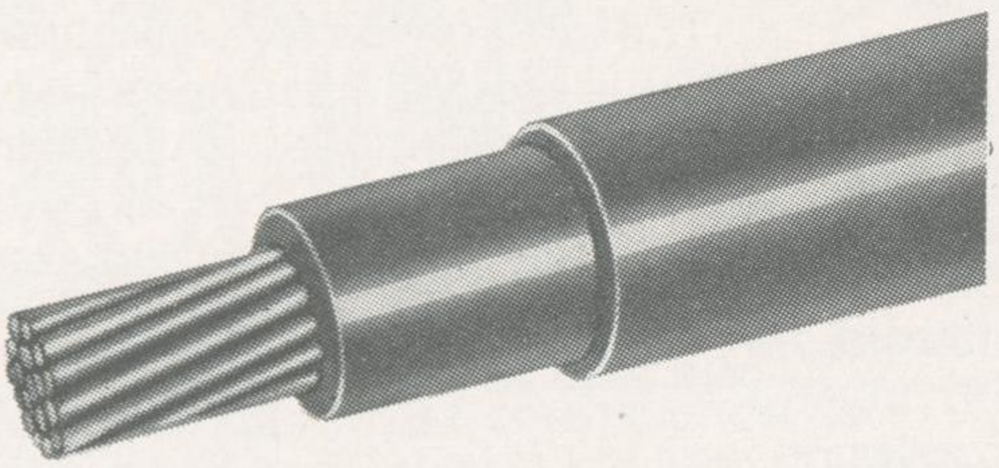
The special gasoline and oil resistant wire designed for use in filling stations and bulk plants.

SAFETY MI



Solid, non-breathing, metallic sheathed Type MI cable eliminates the possibility of gas passage through a cable raceway. Mechanically rugged yet offering a great degree of flexibility. Suitable for any 600 volt application.

CATHODIC PROTECTION CABLE



Available in 3 constructions (rubber-neoprene, polyethylene-PVC and all polyethylene) designed to combat corrosion of pipelines, well casings, storage tanks and other submerged or buried metal structures.

GENERAL CABLE CORPORATION
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Offices and Distribution Centers Coast-to-Coast

for quality and service... **specify GENERAL CABLE**

TESTERS

Wife: "Honey, we lost half our kitchen equipment when our country cottage burned down."

Husband: "Which was it—the can opener or the corkscrew?"

* * *

A sad looking character was shown into the office of a prominent psychiatrist. "I've lost all desire to go on, doctor. Life has become too hectic, too confused."

"Yes," said the doctor, clucking sympathetically. "I understand. We all have our problems. You'll need a year or two of treatment at $50 a week."

There was a pause. "Well, that solves your problem, Doc. Now about mine?"

* * *

The Judge: "Mrs. Maloney, the evidence shows that you threw a stone at Officer Waddell."

"It shows more than that, yer honor," interrupted Mrs. Maloney. "It shows that Oi hit him."

* * *

It wasn't liquor that killed old John,
Nor women that stopped his breath;
'Twas a Volkswagen somebody drove up his leg,
And tickled old John to death.

* * *

Mother to her wailing young son: "Mommy's sorry she ran over your tricycle, dear, but what on earth was it doing in the garden?"

* * *

"My wife dreamed last night that she was married to a millionaire."

"You're lucky. My wife thinks that in the daytime."

Zeke Hinkledorfer has finally figured out what the doctor's scribbling means on prescription blanks.

He says it is a message for the druggist, saying: "I got my $5. Now he's all yours."

* * *

An Arizona rancher suspected his nearest neighbor of foul play when it came to the rancher's cattle which were grazing on a nearby area. The rancher had no proof that his neighbor was absconding with his steers, but finally the situation got so bad that he could stand it no longer. He sat down and wrote the following message which he dispatched by messenger to the adjoining ranch. It read:

"Dear Sir: Please don't leave your red hot branding irons around any more so my cows can lie down on them!"

* * *

The origin of the expression, "hurrah for our side!" goes back to the crowds lining the streets when Lady Godiva made her famous sidesaddle ride through the streets of Coventry.

* * *

Doctors doubt that hard work ever really killed anybody, but they have known cases, where it seemed to scare a person half to death.

* * *

"Boy, whah did you say you got wounded? In whut battle?"

"In de Doggone Forest," replied Rastus.

"You mean the Argonne?" someone asked.

"Well," said he, "maybe they are gone now, but they wus there then."

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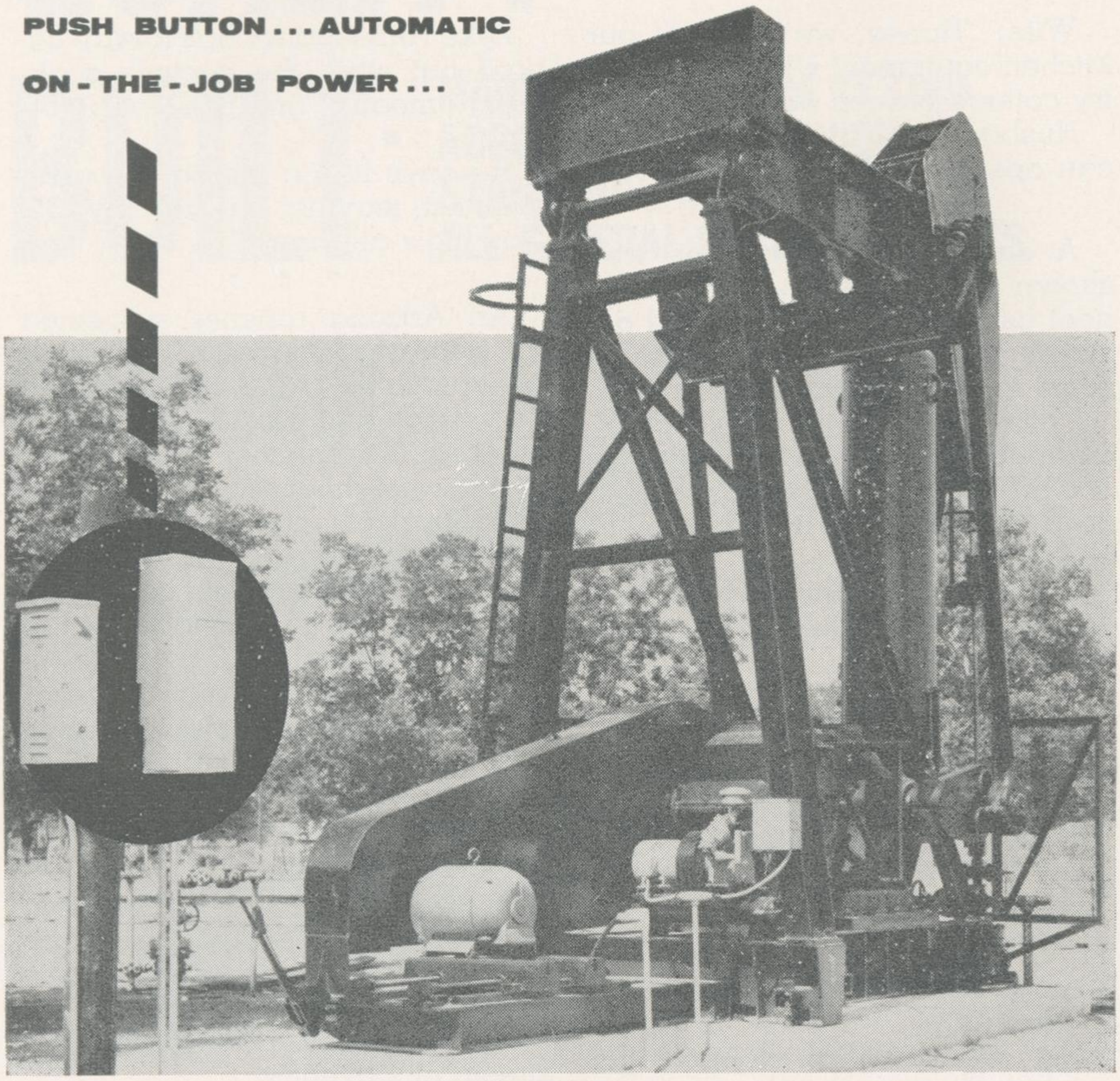

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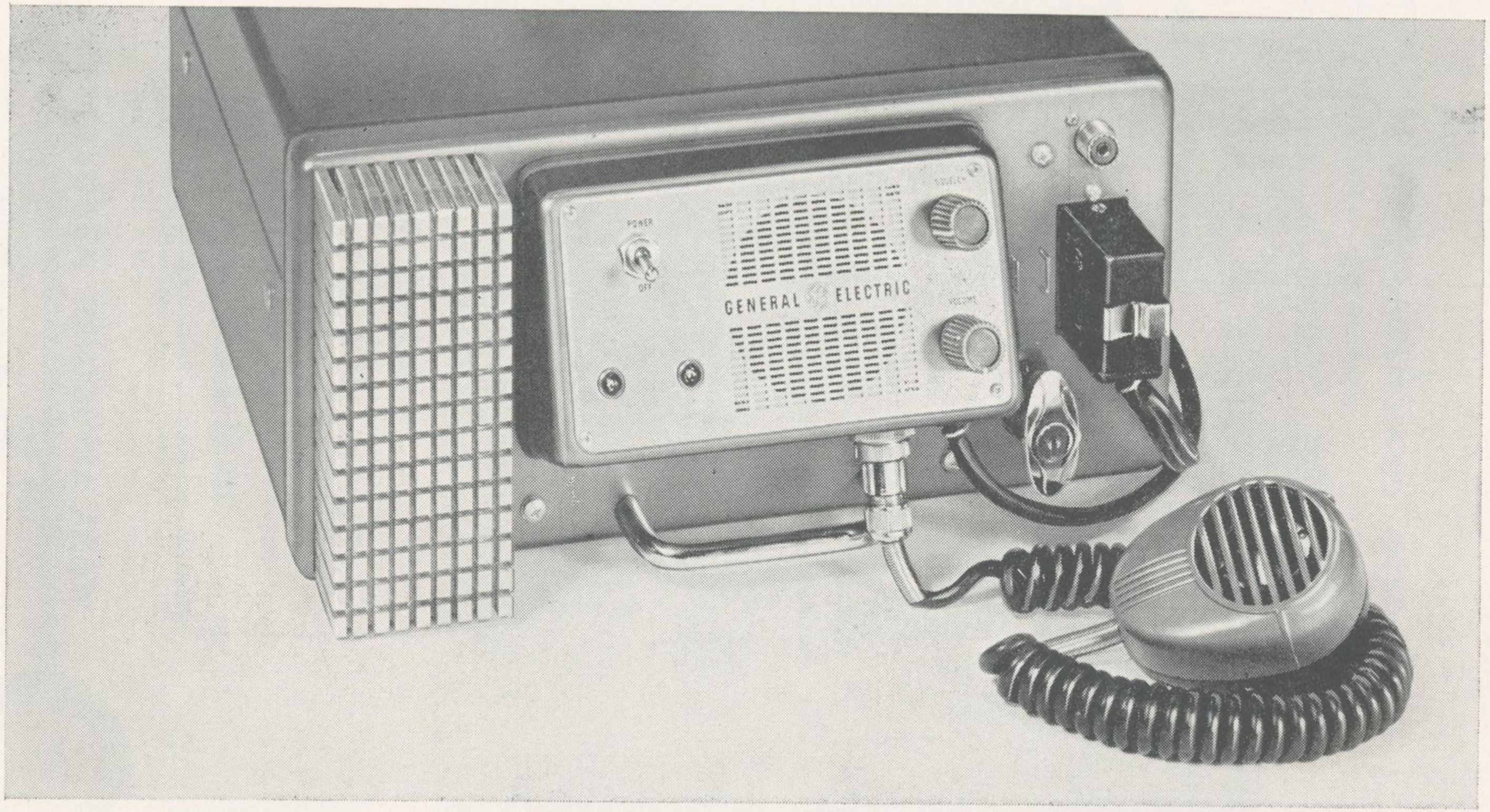

First transistor-powered mobile radios up to 60 watts

General Electric's Progress Line mobile radios

IMPROVED RANGE—Vibrator hash usually asso-

General Electric's Progress Line mobile radios now offer transistor advantages in all bands.

New transistorized power supply for both transmitters and receivers means no vibrators to replace, no rotating or vibrating parts to wear out. Transistors, plus high quality silicon rectifiers, give you the most dependable mobile communication known today.

Progress Line mobile radios with transistorized power supplies are available in *all* communication bands: 30 or 60 watts in low band (25-54 mc), 25 or 50 watts in high band (144-174 mc), or 15 watts in UHF band (450-470 mc).

OPERATE FROM EITHER BATTERY POLARITY—Only General Electric's Progress Line lets you operate on either positively or negatively grounded 12 volt batteries. This is especially important in fleet operations.

IMPROVED RANGE—Vibrator hash usually associated with receivers is totally eliminated by the use of transistors. The result is maximum receiver sensitivity.

NOT DAMAGED BY VOLTAGE VARIATIONS—Unlike vibrators, transistorized power supplies can withstand battery voltage variations from +20 to −50 percent.

PROGRESS WITHOUT OBSOLESCENCE—No need to buy new power cable or control head. General Electric Progress Line mobile units with either new transistorized power supply or regular vibrator power supply are *completely interchangeable.*

Call your G-E communications consultant for full details. He's listed under "Radio Communication Equipment" in the Yellow Pages. Or write General Electric Company, Communication Products Department, Section 848, Syracuse, N. Y.

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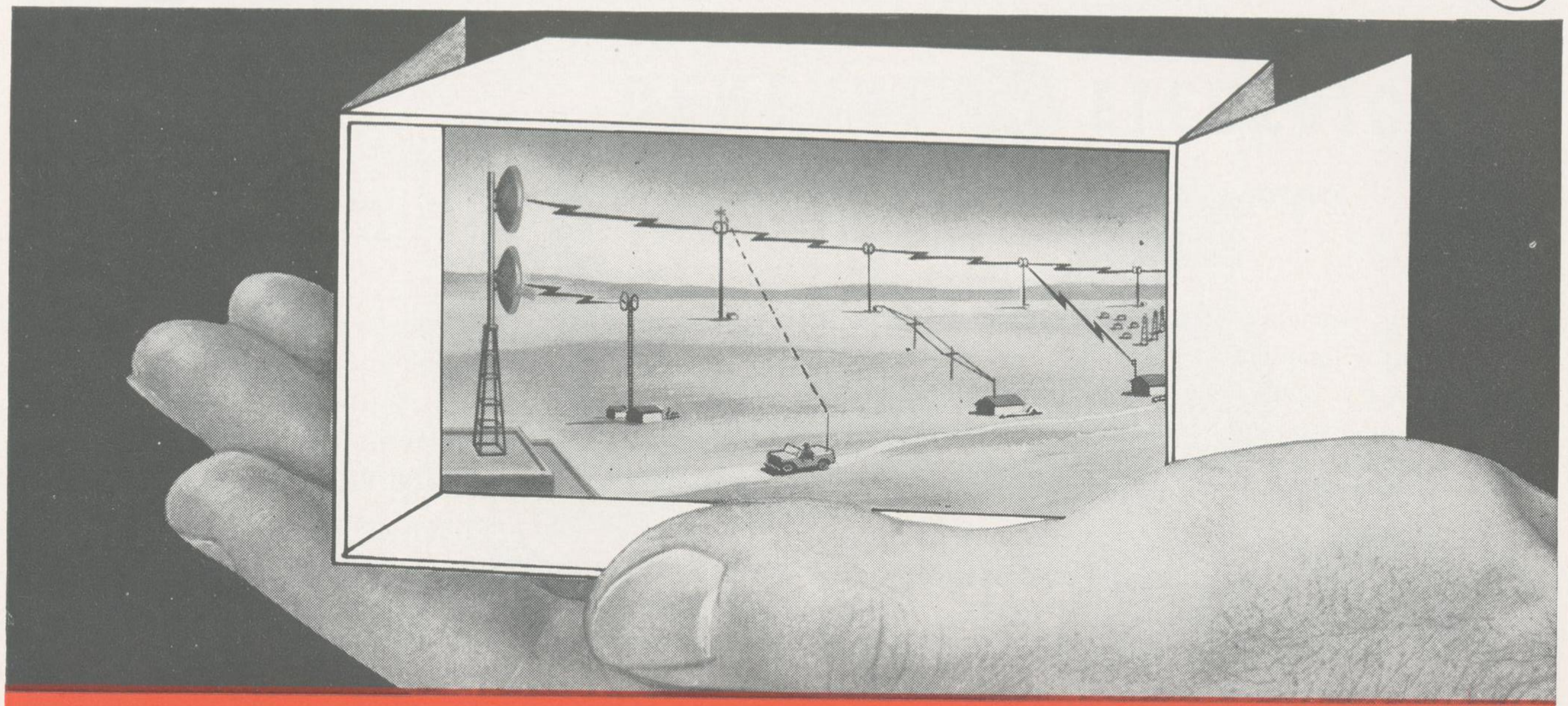

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7. Integrating installation of microwave and mobile radio equipment; complete system

responsibility

supervision and test operation before you take over. *Complete systems engineering is provided where desired.*

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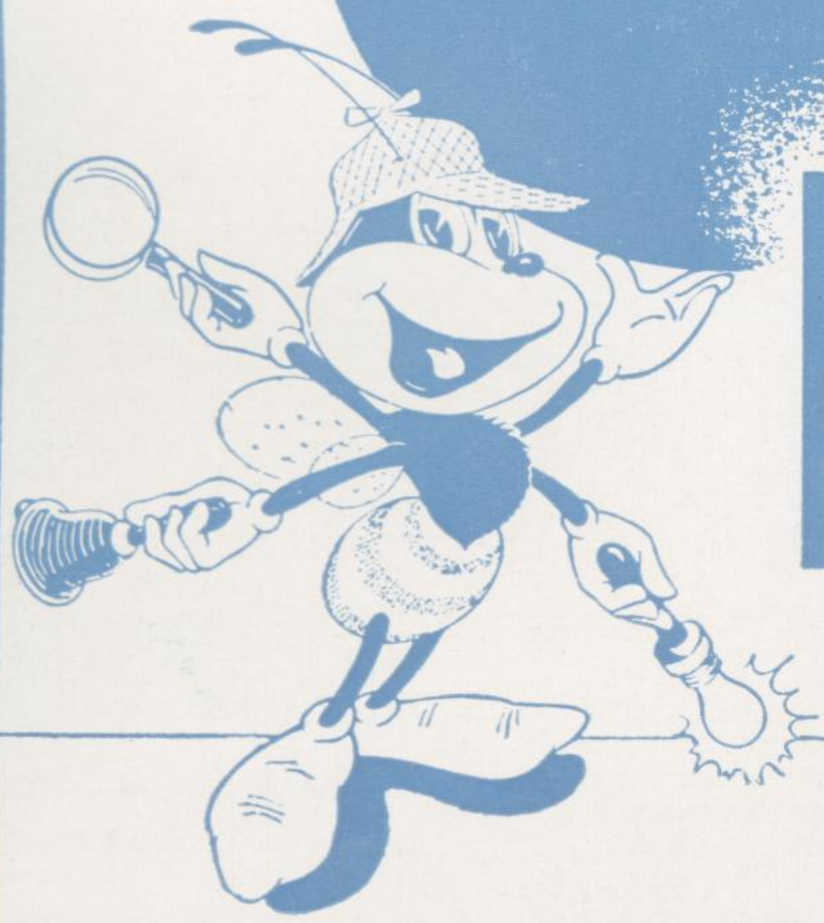

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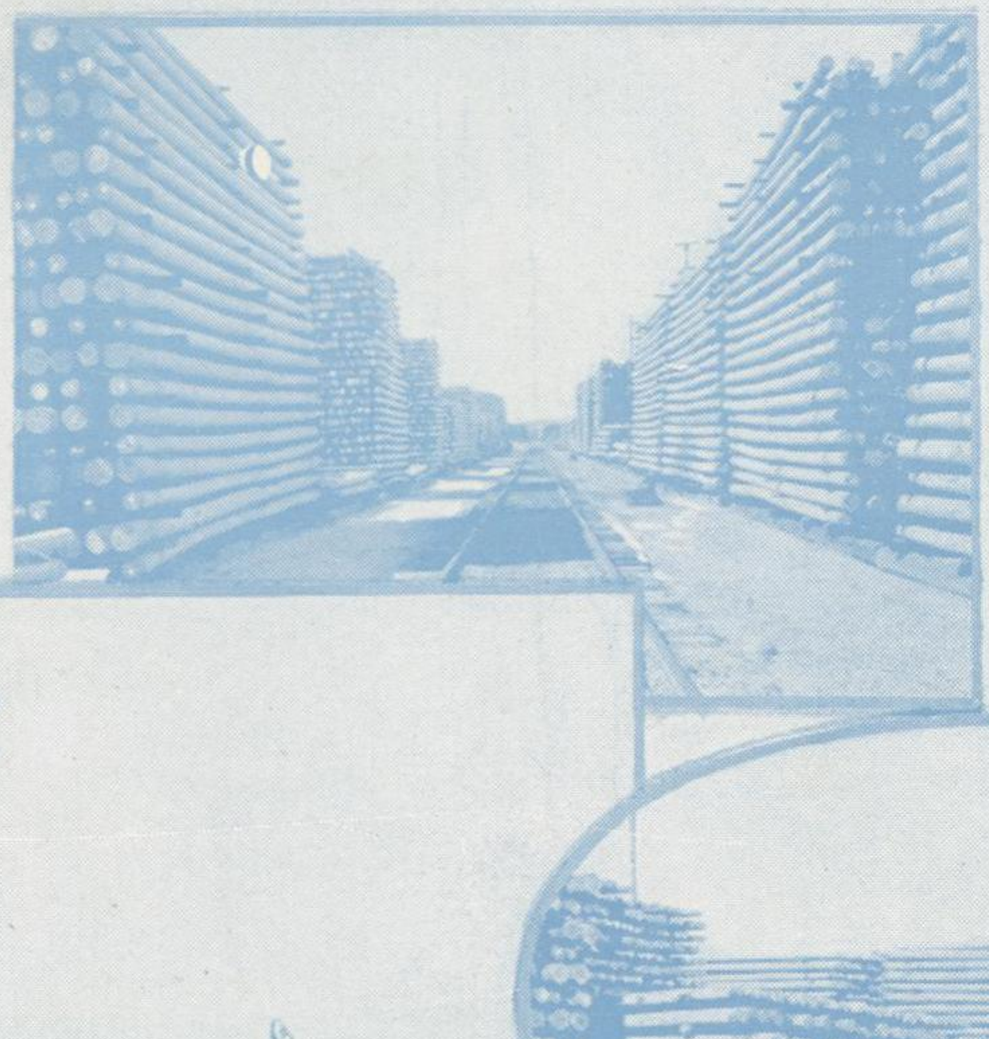

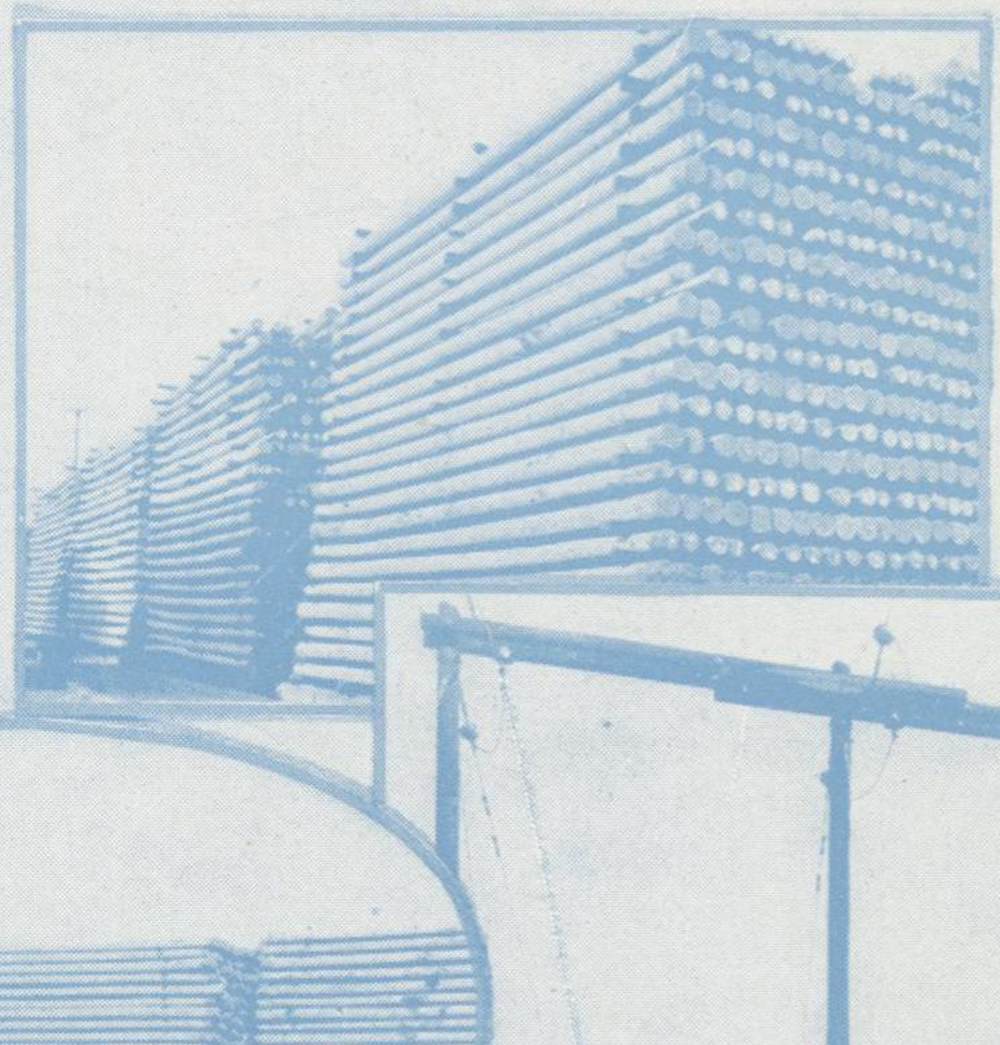

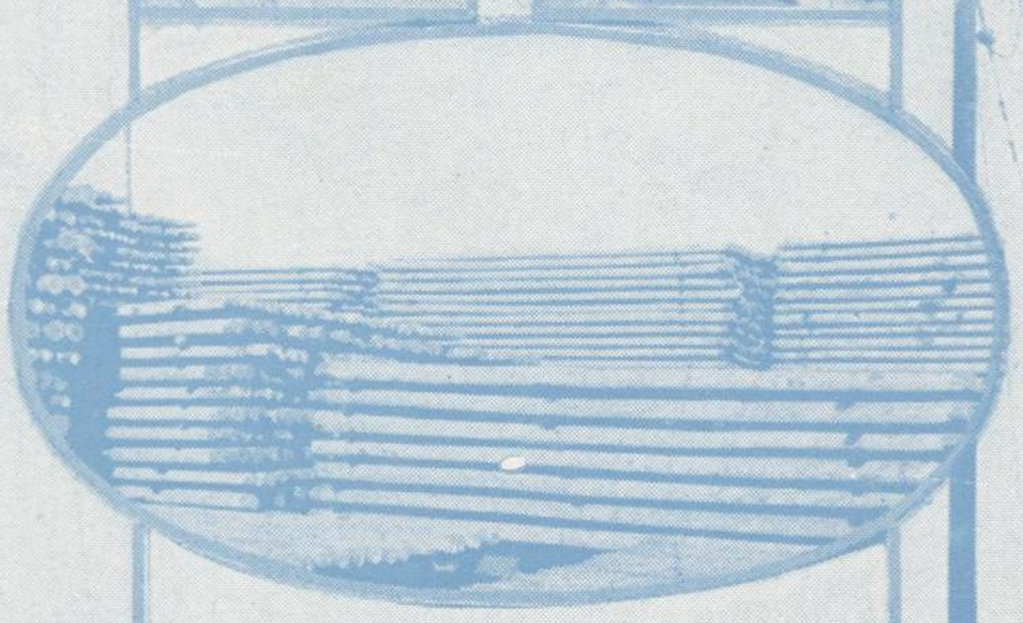

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