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• RAILWAY SIGNAL and COM-MUNICATIONS SUPPLIERS AS-SOCIATION. R. F. McCall, Motorola, Inc., has been elected chairman and J. W. Porter, General Railway Signal Co. has been elected vice-chairman. W. H. Allen has been re-elected secretary-treasurer. Executive committee members, in addition to the officers, include: E. H. Coker, New York Telephone Co.; W. A. Edwards, The Kerite Co.; C. W. Henricks, Union Switch & Signal Div. of WABCo.; D. L. Killigrew, Corning Glass Works; L. C. McGee, R. W. Neill Co.; W. W. Price, Bendix Corp.; M. I. Rayner, Thomas A. Edison Industries; P. J. Salerno, T. George Stiles Co.; and H. A. Scott, Railroad Accessories Corp.

• C&S SECTION, AAR. The 1962 annual meeting will be held at the Sheraton-Chicago Hotel, October 23-25, in Chicago, Ill.

• NEW YORK CENTRAL reportedly will soon ask for bids on a 1,301mile microwave system along the road's mainlines. The main microwave system will be from New York to Chicago, 960 miles, with an extension to Detroit, Mich., from Toledo, Ohio. 58 miles. Another microwave link will be from Cleveland, Ohio, to Indianapolis, Ind., 283 miles.

• CANADIAN NATIONAL'S plans are well along and bids may soon be sought, it is reported, on equipment for a centralized traffic control installation between Biggar Sask., and Edmonton, Alta., 267 miles. Informed sources indicate that it will be modified CTC with a spring switch at one end of each passing siding and a power switch at the other end, with the usual controlled signals.

• NORTHERN PACIFIC is reported to be planning a microwave system from Portland, Ore., to Seattle. Wash., 186 miles.

• NORFOLK & WESTERN will spend \$35.7 million for new equipment and improvements if the ICC approves the proposed N&W-NKP-Wabash consolidation. Major projects include installation of 110 track miles of CTC between Logansport and Fort Wayne, Ind., and Detroit and (Please turn to page 40)

RAILWAY SIGNALING and COMMUNICATIONS

(Continued from page 38)

Adrian, Mich.; extension of passing sidings; enlargement of yard facilities at East Wayne (Fort Wayne), Ind.; Peru, Ind.; Brooklyn (East St. Louis); Bellevue, Ohio; Calumet Yard (Chicago) and Buffalo; installation of automatic and remotely controlled interlockers at crossings of other railroads; extension of N&W's direct dial telephone system to major points on the other roads; and installation of CTC on the Columbus-Sandusky line.

• SOUTHERN has placed a \$5,965,-000 order with the General Electric Co. for a 70-station microwave system to be installed between Cincinnati, Ohio, and Chattanooga, Tenn., be-tween Chattanooga and Knoxville, Tenn.; Chattanooga and Birmingham, Ala.; Chattanooga and Atlanta, Ga.; and Birmingham and Atlanta-a distance of 913 miles. This represents part of a total of \$7,926,000 that the Southern will spend to more than double its microwave system. At Atlanta the new installations will join the earlier GE system having 50 microwave stations that Southern will put in service early next year over the 637-mile distance between Washington, D.C., and Atlanta. Total system microwave mileage will be 1,684 when the newly contracted work is completed.

• CREWLESS SUBWAY TRAIN will undergo three to six months' testing on the Grand Central Terminal-Times Square shuttle of the New York City Transit Authority, beginning late this month or early next month. This automatic subway train has both GRS and US&S equipment and was tested last fall in Brooklyn (RS&C Nov. 1960 p 16).

• SOUTHERN has obtained a favorable court ruling against the ICC, which was attempting to "obtain compliance with its rule requiring track circuits and route locking to be provided throughout interlocking limits." The case involved the collision between a Central of Georgia switching movement and a Southern freight train at Rome, Ga., on March 8, 1960. The Southern operates and maintains the interlocking. An abstract of the ICC's investigation appeared in the September 1960 issue of Railway Signaling and Communications, page 27. The report concluded: "This accident was caused by failure to operate the C. of Ga. movement in accordance with the rules governing movements within in-



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terlocking limits, and an improper installation of interlocking track circuits." In this case the shunting point of the track circuit in question was 17' 6" in advance of the home signal. RS&C editors asked the Interstate Commerce Commission to clarify its position with regard to track circuits at an interlocking, and Chairman Everett Hutchinson replied as follows:

"After the investigation report was issued the Southern Railway was cited for failure to comply with Section 136.302 of the Commission's Rules, Standards and Instructions and in the subsequent court action, the court ruled against the Commission and found in favor of the defendant, Southern Railway Company, on the basis of the facts presented and arguments of counsel.

"This verdict has not altered the Commission's position with respect to its interpretation of Section 136.302, which requires that track circuits shall be provided throughout interlocking limits. Since the term Interlocking Limits is defined in Section 136.753 as the tracks between the opposing home signals of an interlocking, it is still the Commission's position that the shunting point of a track circuit shall be opposite the home signal. However, the Commission has not insisted upon strict compliance with this requirement, and accordingly has not taken exception to interlocking track circuits in which the insulated joints are so installed that shunting will be effective at a point not more than 5' in advance of the home signal, in accordance with AAR Signal Section Drawing 1634C.

"This matter is now under active consideration by the Commission's signal experts and any subsequent revision of the Rules, Standards and Instructions will incorporate the results of their deliberations. In this connection, it should be noted that any proposed revision of this matter will be published in a Notice of Proposed Rule Making, and any interested party will have an opportunity to be heard before the rule is finally adopted."

• ILLINOIS CENTRAL has ordered CTC materials from Union Switch & Signal Division for installation between Fulton and Ballard, Ky., 37 miles. Control will be from an existing TCC machine at Carbondale, TH.

 NORTHERN PACIFIC has found that flying a helicopter over line wires (Please turn to page 42)



(Continued from page 41)

is an effective means of dislodging ice on the wires. Down-draft of the helicopter propeller was sufficient to "blow" ice off line wires last winter.

Current Publications

• SEMICONDUCTORS. "Industrial Transistor and Semiconductor Handbook" lists data on these components, including operating characteristics, circuit design and typical installations. New arcas of the field, such as thermoelectricity, energy conversion, power inverters, etc., are also covered. First chapters discuss the basic physics and circuit fundamentals of the devices. Catalog No. TTT-1, 256 pages, \$4.95. Howard W. Sams & Co., Dept. RSC, 2201 East 46th St., Indianapolis 6, Ind.

• ELECTRONIC CALCULA-TIONS. "Handbook of Electronic Charts and Nomographs" contains 58 of these calculation aids. (A nomograph is a pictorial method of solving numerical problems by drawing a straight line between two scales, and reading the answer from a third scale.)



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Railroad Personnel

• SOUTHERN PACIFIC. Lloyd Rittenhouse, recently named actin district communications supervisor Sparks, Nev., has been appointed di trict communications supervisor Tucson, Ariz., succeeding the la Burris E. Buchanan. Ralph E. Ligge has been named electronics engine

• NORTHERN PACIFIC. S. (Sworder, Sr., signal supervisor at He ena, Mont., has been appointed ge eral signal supervisor at Livingsto Mont., succeeding Floyd C. Harrin ton, who has retired. Mr. Sworder wi born at Twin Valley, Minn. in Mart 1899. After graduating from hig school in Livingston, Mont., he entere NP service as a signal maintainer helper in 1919. He held various cos struction and maintenance assignment until becoming signal inspector 4 Billings, Mont. in June 1954. He wa promoted to signal supervisor at He ena, Mont., in June 1956.

Mr. Harrington, born in St. Paul Minn. on July 8, 1891 completed in high school education in that cin After nine months in the NP's engneering department as a chainman. Is became a signal maintainer's helper is January 1911. Advancing throug various positions, Mr. Harrington we appointed signal supervisor at Bel grade, Mont. in July 1921. He wa promoted to general signal supervisor in June, 1956 with headquarters = Livingston, Mont.

• BALTIMORE & OHIO. J. Her bert Wallis, superintendent of communications, has been given the pertitle of communications engineer.

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Joe M. Beavers

Howard E. Webb

arge of the communications departint.

Joe M. Beavers, supervisor of signal nstruction, has been appointed genil signal supervisor at Baltimore, d. Mr. Beavers was born July 27, 27 in Medora, Ind. After graduating m high school in 1945, he entered O signal service as a helper. He adnced through positions of mainner, foreman, signal inspector and came assistant chief signal inspector 1957. He was promoted to assistant nal supervisor on Jan. 1, 1959 and July 1961 he was appointed superor of signal construction.

LOUISVILLE & NASHVILLE. ward E. Webb, assistant signal eneer, has been appointed principal istant signal engineer at Louisville, '. Mr. Webb began as a laborer in signal department of the L&N in 10 and later was advanced to sigman and lead signalman. Following vice in the armed forces during orld War II, he became a signal iftsman in the signal engineer's ice in Louisville, in 1946. In 1953 was appointed assistant signal pervisor and in 1957 assistant sigengineer.

CHESAPEAKE & OHIO. As reted in Railway Signaling and mmunications, July 1961, Theoe L. Carlson succeeded the late F. Anderson as general superindent signals and communications Richmond. Since then, as noted in October issue, Edward A. Burgin been promoted to superintendent signals at Richmond and Robert Margsh to signal engineer at Deit. U. H. Auckerman, Carl D. CMillan and Arthur M. Weeks re been appointed district engisignals, at Richmond, Detroit rs I Huntington, W. Va., respectively. iographical sketch of Mr. Carlson's eer appeared in the August, 1961, ie of RS&C, p. 44, and of Mr. rgin in October, p. 74. Mr. Margsh was born on February

1906, in Philadelphia, Pa. After duating from high school he took ning courses in mechanical draw-(Please turn to page 44)

/EMBER 1961



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NEWS BRIEFS

(Continued from page 43)

ing. He began his railroad career in 1926 as assistant signalman on the Pere Marquette (now C&O). After various promotions he became a signal supervisor in 1942, circuit designer in 1944, assistant engineer in 1945, and assistant signal engineer at Detroit in 1949.

A biographical sketch of Mr. Auckerman appeared in RS&C, June 1960, p. 70, upon his appointment as assistant engineer, signals, at Richmond, and a photograph in July 1960, p. 50.

Mr. MacMillan was born September 7, 1906, at Marquette, Mich. He attended high school at Saginaw, Mich., and began his railroad career in 1923 with the Pere Marquette, as a messenger. In 1924 he was transferred to the signal department as a clerk in the supervisor's office. In 1929 he became an assistant signalman, advancing to maintainer and signal inspector. Mr. MacMillan was promoted to signal draftsman at Detroit in 1945, to assistant engineer in 1949, and assistant engineer, signals, at Detroit, in 1955.

Mr. Weeks was born May 25, 1902, at North Platte, Neb., where he was graduated from high school in 1918. He subsquently went with the Union Pacific and in 1920 joined the C&O as signal wireman. He served in various capacities in the signal department, becoming signal supervisor in 1940 and general supervisor signal construction in 1946. Mr. Weeks was appointed engineer signal construction and general signal inspector in 1951, and engineer signal construction and maintenance at Huntington, W. Va., in 1955.

• NEW YORK CENTRAL. The headquarters of L. S. Bottinelli, chief signal engineer, has been moved from Cleveland to New York.

• CANADIAN PACIFIC. Robert I. Becksted, regional signal engineer, Eastern region, at Toronto, retired October 1 and has been succeeded by Douglas H. Walkington, assistant engineer in the office of the signal engineer, Toronto.

Mr. Becksted was born in Montreal, September 6, 1896. He attended Cowansville Academy in the Province of Quebec and for a short time worked for the Hall Switch & Signal Co. in a signal construction gang. He entered the employ of the CPR in January 1914 as a signal maintainer's helper, advancing to signal maintainer and signal foreman. In 1928 he was ap-





Theodore L. Carlson





Carl D. MacMillan

Robert W. Margs

pointed signal supervisor at Montrea being transferred to Tronto in 193 where he was made assistant sign engineer in 1946 and regional sign engineer in 1952.

Mr. Walkington was employed du ing summer vacations while attendir (Please turn to page #



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NEWS BRIEFS

(Continued from page 44)

McGill University, as a laborer and lineman on CPR signal gangs and also as a signal draftsman in the office of the signal engineer at Toronto. He was graduated from McGill in 1953 with a B.E. degree in electrical engineering, after which he became a signal draftsman in the office of the chief engineer of the CPR at Montreal. In 1955 he was promoted to assistant engineer, signals, in the same office. In 1957 he was transferred to Toronto as assistant engineer in the office of the





Royal M. Scott

Richard G. Jones



D. H. Walkington

Robert I. Becksted

signal engineer, to co-ordinate design and installation of CTC on the Trenton division.

Supply Trade News

• RADIO CORP. OF AMERICA. Vroman W. Riley has been assigned sales responsibility in 15 Eastern states for RCA's microwave department.

•LENKURT ELECTRIC CO. Royal M. Scott, formerly superintendent communications, Southern Pacific, has joined Lenkurt as a sales engineer assigned to the Southwestern district office at Dallas, Texas.

• ALPHA CORP. Vernon L. Hedges has been appointed microwave sales and engineering representative for the microwave systems division. Mr. Hedges will be headquartered at Galion, Ohio and will cover five states. Collins Radio Co. microwave sales, engineering, service, etc. was recently integrated into Alpha, a division of Collins.

 LYNCH COMMUNICATIONS SYSTEMS, INC. David Shisler, manager of the inside sales department, has been appointed manager of application engineering.

• WILLIAM E. GADD, formerly vice-president of the Rail Joint Co., has opened an office at 575 Main St., Chatham, N.J., for the purpose of acting as sales engineer and consultant in the railroad supply industry.

• MOTOROLA INC. Richard (Jones has been appointed sales man ager of microwave equipment to rai roads. He has been with Motorol since 1956, and recently has been in their national marketing organization. Prior to this he was microwave sales manager for an 11-state western area.

Robert L. Borchardt has been appointed national service manager for Motorola Communications and Electronics Inc. With Motorola since 1950, he had been sales service manager.

Obituary

• G. F. BARLOW, general planning assistant, private wire and traffic, Canadian National Telecommunications, died recently.

• KENNETH CHAMBERLAIN, retired signal engineer, Chicago & North Western, died within the past year, according to a report at the recent C&S Section, AAR, annual meeting.

• WILLIAM D. NEIL, retired general manager of communications, Canadian Pacific, died recently.

• BURRIS E. BUCHANAN, district communications supervisor, Southern Pacific at Tucson, Ariz. died recently.

 JOHN V. MITCHELL, production manager, Railway Signaling and Communications, died Oct. 23, after a short illness.

This Was News 50 and 25 Years Ago

The Signal Engineer, November 1911. A set of figures for making estimates on the cost of automatic block signaling taken from averages of a number of installations show the following: bonding cost per mile is \$28; cut section is \$70.46; single relay location with two line wires has a maximum cost of \$116.50 and a minimum cost of \$94.20; a two-position signal, track control, with track feed should be \$315.10; and a three-position signal, line control, with track feeds, for overlap should be \$701.15. Unit labor costs, for example, show: bootlegs, cost per signal is \$3.41; supervision at \$24.91 per mile; drilling and bonding at \$11.76 per mile; painting at \$1.22 per signal; and testing at \$1.97 per signal. -Interesting comment from a division superintendent to a signal supervisor on a wiring plan and blueprint for highway crossing bells: "To tell the truth, your diagram appears to me to represent the side elevation of a modern battleship equipped with wireless towers, the height of the water on the side of the vessel being indicated on the bottom of the plan."-Lehigh Valley is changing over from white for clear and green for caution to green for clear and yellow for caution. Three-position upper-quadrant and two-position lower-quadrant signals are now being put in to replace the disk signals on 159 miles of track.

Railway Signaling, November 1936. Pennsylvania installs castiron dragging equipment detectors at four locations. The detector arrangement includes cast-iron arms mounted on each side of both rails and slightly below the top of the rail, the arms being connected in an

electrical circuit in such a manner that the breaking of any one of the detectors causes the wayside signals as well as the locomotive cab signals to give warning to the engineman that he should stop the train. The detectors are located approximately 8,000 ft in approach to interlockings .-- New York Central all-relay interlocking at Syracuse, N. Y. passenger station features CTC paneltype interlocking machine with miniature non-interlocked levers, dwarfs used as home signals and operating and control circuits normally fed from rectifiers.-Telephone and Telegraph Section, AAR, discussed carrier systems, teletype and amateur radio stations at its annual convention.-Southern Pacific handles about 1,800 waybills each night by multiplex printer between San Francisco and Los Angeles.

RAILWAY SIGNALING and COMMUNICATIONS

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