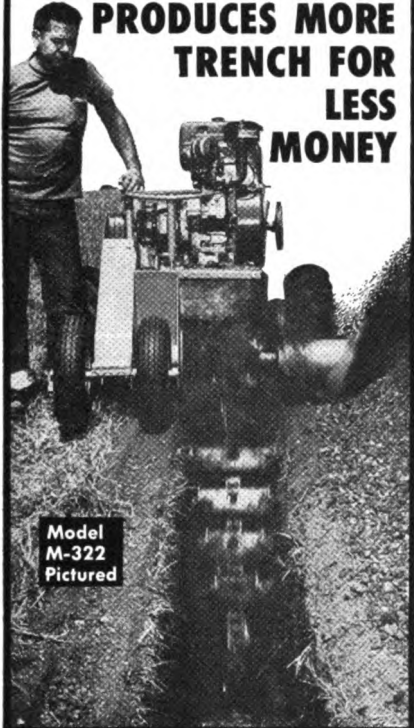


*"More or Less"*  
**THE BEST**



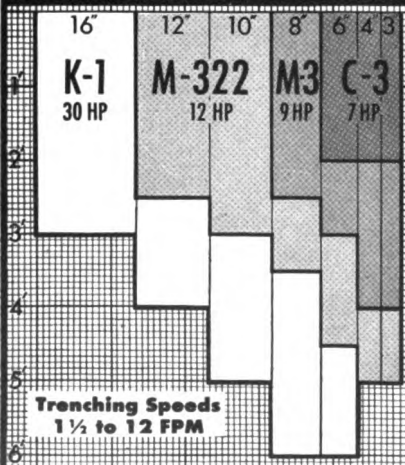
Other trenchers cost *"More or Less"*  
Other trenchers dig *"More or Less"*

**BUT DITCH WITCH  
PRODUCES MORE  
TRENCH FOR  
LESS  
MONEY**



Model  
M-322  
Pictured

**TRENCH SIZES FOR 4 MODELS:**



- USE FOR:**
- Utility Services
  - Gathering Lines
  - Signal Lines
  - Sewer Laterals
  - Road Crossings
  - Sprinklers
  - Footings, etc.

**CHARLES Machine Works, Inc.**  
688 Birch St., Perry, Okla.

To Locate Distributor, Look Under "Contractors Equipment" in 1960 Metropolitan Telephone Directory Yellow Pages for Ditch Witch Trade-mark; or Call Collect FE 6-4404, Perry, Okla.

**SIGNALING AND COMMUNICATIONS**

# News Briefs

**THE MILWAUKEE ROAD** has installed memory dialing equipment for crew calling at Muskego yard, Milwaukee, Wis. Telephone numbers are recorded on magnetic tape. The caller simply turns a dial until the crewman's name appears in a window on the dialing console, and the equipment automatically dials the number. A dial on the console is used to record new numbers on the tape or erase old ones. The equipment has a capacity of 300 numbers. During peak periods as many as 75 to 100 calls are made.

**UNION PACIFIC** has begun construction of a 563-mile microwave system between Omaha, Neb., and Laramie, Wyo. Eighteen repeater stations will be spaced about 18 to 35 miles apart. Intermediate terminal stations will be located at Grand Island and North Platte, Neb., and Cheyenne, Wyo. Normally operated from commercial power, the stations will have storage batteries and standby electric power plants for emergency use. Dual microwave transmitter and receiver equipment will also be provided. Initially the installation will provide 48 channels or circuits, but more will be added as they are needed. Completion of the project is scheduled for September of this year, and ultimately the UP expects to have system-wide microwave facilities.

**PHOTO-ELECTRIC EYES** watch for high loads on eastbound New York Central freight trains as they near Buffalo, N.Y. Interruption of the light beam by a high-loaded car actuates an alarm bell and light which alert a towerman. He can then take action to have the train stopped before the high-loaded car collides with a low bridge or overhead highway viaduct. Successful operation of these eyes has led the NYC to consider a program of installing them at 20 or more locations on the eastern district.

**TOLEDO TERMINAL RAILROAD** has ordered Motorola 64-volt "Stan Pac" two-way mobile radio units for seven diesel locomotives.

**DELAWARE & HUDSON** will provide complete radio coverage of the 764-mile railroad by expanding the present system at a cost of \$127,410. All trains, maintenance of way equipment, and highway vehicles will be included in the radio network. The work involves installation of 23 wayside stations and broadcasting facilities at Wilkes-Barre, Oneonta and Whitehall. Radio equipment will be installed on an additional

21 locomotives, making 164 equipped. The number of pack-sets will be increased by 19. Improved train performance, greater maintenance efficiency, and increased safety of operation is expected from the installation.

**CHICAGO TRANSIT AUTHORITY** will spend \$118,000 to install block signal and automatic train control system on the Logan Square branch of the West-Northwest L-subway route in anticipation of construction of a rapid transit line in the Northwest Expressway median strip.

**BURLINGTON LINES** receive ICC approval to install a traffic control system on two main tracks to provide for operation by signal indications in both directions on each track for about 3 miles, and traffic control on one main track to provide for train operation by signal indications for about 30 miles all between St. Joseph, Mo., and Napier. These traffic control systems will replace automatic block signaling on double track, and will involve the removal of portions of second main track except for sidings on about 30 miles of road.

**UNION PACIFIC** will complete its system-wide long distance dialing this month with the tie-in of facilities in Los Angeles, Calif. Construction is soon to be started on the railroad's microwave system between Omaha and Laramie, Wyo.

**NEW YORK CENTRAL** and **NICKEL PLATE ROAD** have received approval from the ICC for the installation of an automatic interlocking to replace a mechanical interlocking at Ridge Farm, Ill. The automatic plan involves a single track of the NKP and two main tracks of the NYC, one of which will be removed.

**CHESAPEAKE & OHIO** has received ICC approval to install traffic control on two main tracks for bi-directional signal indication operation between Chelyan and St. Albans, W. Va., 27 miles. This CTC will be in lieu of automatic block signals and remote control switches and crossovers. The control machine will be at Huntington, W. Va.

*(Continued on page*

**TECHNICAL TRAINING FOR RAILROAD MEN**

Railway Signaling  
**THE RAILWAY EDUCATIONAL BUREAU**  
1809 Capitol Avenue  
Omaha 2, Nebraska

## NEWS BRIEFS

(Continued from page 40)

which will include controls of three previously remote and local control interlockings.

1960—Signaling and communications projects, according to Railway Age, include the following: *Canadian National*. New classification yard, Toronto, Ont., \$8,400,000; install CTC on 14 subdivisions, \$5,015,000. *Delaware & Hudson*. Install CTC for single track operation between Afton, N. Y., and Crescent, \$1,460,000; install CTC between Hudson, Pa., and Carbondale, \$635,000. *Missouri Pacific*. Construct retarder classification yard, North Little Rock, Ark., \$6,691,200. *New York Central*. Install CTC \$14,844,711; install retarder classification yards, \$34,525,415. *Norfolk & Western*. Install CTC at three locations, \$2,214,000. *Pennsylvania*. Install automatic crossing protection at five streets, Newcomerstown, Ohio; install CTC from Indianapolis to Lebanon, Ind.

CHICAGO & EASTERN ILLINOIS and NEW YORK CENTRAL have received ICC approval for installation of an automatic interlocking to replace a mechanical interlocking at Chicago Heights, Ill., at a double-track crossing of the C&EI with a single track of the

NYC. These roads have also received approval for installing an automatic interlocking at Westville, Ill., where one main track of the C&EI crosses two tracks of the NYC. One of these NYC tracks is to be removed, as is a C&EI-NYC transfer track.

MISSOURI PACIFIC has received ICC approval for modification of traffic control on 80 miles of single track and 8 miles of double track between Poplar Bluff, Mo., and Newport, Ark. Also, the railroad has received permission to remove power switches and controlled signals at both ends of 8 sidings, and to relocate the power switch and controlled signals at one end of each of 6 sidings. The control point will be changed from Knobel to Newport, Ark.

### Current Publications

CODED TRACK CIRCUITS, Chapter XXV of American Railway Signaling Principles and Practices has been revised. This chapter provides a knowledge of the fundamental principles which apply to coded track circuits. A number of applications to railway signaling are described to show the use of coded circuits and to illustrate the flexibility which they can provide with a minimum of line wires. Price 35 cents. *Signal Section, AAR, 59 E. Van Buren St., Chicago 5, Ill.*

MEASURING GALVANIC POTENTIALS in corrosion control and cathodic protection is the application for which the model 610 Hayward dual-sensitivity dc voltmeter was designed. Bulletin 1-3 gives details on the method by which the dual range direct reading voltmeter can be used to measure open circuit structure to soil voltages. *Associated Research, Inc., Dept. RSC, 3777 W. Belmont Ave., Chicago 18, Ill.*

HOT BOX DETECTOR—Bulletin GEA-6950, eight pages, describes General Electric's new hot box detector. Diagrams and photographs show system components, various installations, and how the system works. The bulletin also describes GE's carrier-current equipment for remote inspection of journals at any point away from the trackside location of the detector. *General Electric Co., Dept. RSC, Schenectady 5, N.Y.*

ENGINE GENERATORS—Onan's catalog F-146 is an 8-page folder listing more than 45 basic models of Onan gasoline and diesel engine-driven generator sets. Each series of plants is described in detail, with specifications for both engine and generator given. A chart of representative models within each specific series outlines such details as capacity of the plant, model number, voltage, starting method, dimensions and weight. Optional accessories for each

series of generating plants are also illustrated. *D.W. Onan & Sons Inc., Dept. RSC, 2515 University Ave. S. Minneapolis 14, Minn.*

LINE TRUCKS—Holan Corporation's series 5100 general service body including dimensional and compensation data, optional equipment design and engineering features, are illustrated in detail in a new brochure. The general service bodies, built for 1½-ton truck chassis, are of high tensile steel. Selection of optional equipment makes possible adaptation of body for a number of uses. *Holan Corp., Dept. RSC, 4100 West 150th St., Cleveland 35, Ohio.*

SOLDERLESS CONNECTORS and Terminal Blocks, catalog No. 85, eight pages, features Buchanan pres-Sure-connectors for wire splicing and terminating, and sectional and one-piece terminal blocks. It also contains information on squeeze-type Romex connectors, insulated conduit bushings, knock-out plugs and cable staples. *Buchanan Electrical Products Corp., Dept. RSC, Hillside, N.J.*

### Railroad Personnel

A. E. DeMATTEI has been appointed general superintendent of communications—system, Southern Pacific—Texas & New Orleans, with headquarters at San Francisco and Houston.

G. L. TROUT, general signal inspector of the Nickel Plate, at Cleveland, has been appointed signal supervisor at Conneaut, Ohio, succeeding H. M. VAN OSINSKI, retired. C. M. CANADA, assistant signal supervisor at Frankfort, Ind., has been promoted to signal supervisor there, succeeding CHARLES METTLEN, also retired.

NEILL S. LEWIS, formerly superintendent telegraph and signals, and WALTER E. WHITE, assistant supervisor

(Continued on page 44)

### POSITION WANTED

Superintendent of Communications or equivalent. Twenty-two years of communication experience, including electronic yard, radio, and inter-city dial. Presently responsible for entire communications plant on Class I railroad. Desire new position with challenge. Box #121, RAILWAY SIGNALING AND COMMUNICATIONS, 30 Church St., New York 7, N.Y.

### POSITION AVAILABLE

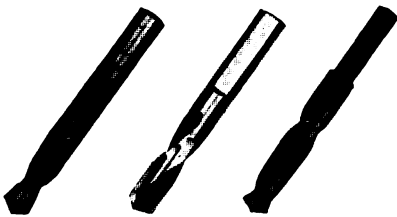
Railway Signal Circuit Engineer For electric railroad in New York City area. Rapid transit experience desirable. In reply state age, education and employment history, present salary and complete details of experience. Box #122, RAILWAY SIGNALING & COMMUNICATIONS, 30 Church St., New York 7, N.Y.

## HOWARD & GOULD

### SIGNAL BONDING DRILLS

THESE SUPER BONDING DRILL BITS HAVE LONG ESTABLISHED UNPRECEDENTED RECORDS OF MORE HOLES PER RUN, LESS BREAKAGE, CHANGING AND GRINDING IN ALL TYPES OF RAIL.

Preferred by the signal forces of the many American and Canadian railroads, terminals and mining properties new regular users.



THE RIGHT DRILL FOR EACH TYPE OF BONDING

Three styles of Howard & Gould bonding drills produce the fastest and lowest cost drilling in each type of bonding. Made of the toughest drill steel by processes that produce PREMIUM PERFORMANCE and LIFE, WITHOUT PREMIUM PRICES.

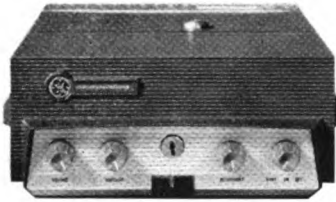
Bulletin on request.

**HOWARD & GOULD CO.**

5306 W. LAWRENCE AVE. CHICAGO 30, ILL.

# NEW! G-E PORTABLE 2-WAY RADIOS

## ...from Graybar



General Electric Progress Line  
MOBILE 2-WAY RADIO

General Electric Progress Line  
PORTABLE 2-WAY RADIO



### Here are the first 2-way radios with completely transistorized receivers!

How much can these radios do to hold down maintenance costs? What can they do to "precisionize" classification; to improve yard or right-of-way communications? How many steps can they save a railroad man in a day? ... Plenty!

If, for example, you want better communications for motor vehicles in yard service, the new G-E MOBILE 2-WAY RADIO hasn't an equal. It is built to withstand the most rigorous day-in-day-out use and abuse. And it requires virtually no maintenance.

Or you may be considering equipment for car checkers. Equip the men with the new transistorized G-E PORTABLE 2-WAY RADIO and they'll always get their calls clearly; always know how to reach the next job in the shortest time.

In how many ways can you improve your communications with the new G-E 2-WAY RADIOS? These radios are available from Graybar nationally. So write for latest data and application ideas, or call your nearby Graybar man.

#### LOOK AT THE PRODUCT STORY

**Low power drain — longer battery life** — because receiver is fully transistorized. No tubes draining power when receiver is on standby.

**Loud, clear signal** — because sensitivity exceeds that of any other portable. You get a big 3½" self-contained speaker.

**You never miss a call** — because you don't have to put a handset to your ear to hear the incoming signal.

**No worry about channel crowding** — because the portable is available for dual frequency operation.

**Real dependability** — because connections are more reliable: printed circuits are plated clear through the holes.

**Field servicing is easy** — because "you just open it up like a book." Construction is modular. Only standard mobile test equipment is required.

*Graybar carries the most complete line of modern communications equipment available from any single source. Let Graybar help with your plans.*

call **GraybaR** first for  
ELECTRIC COMPANY, INC.



946  
IN OVER 130  
PRINCIPAL CITIES

GRAYBAR ELECTRIC COMPANY, INC., 420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

#### NEWS BRIEFS

(Continued from page 42)

telegraph and signals of the Virginian, at Princeton, W. Va., have been appointed assistant superintendents signals of the Norfolk & Western, at Roanoke, Va. W. G. LEWIS, formerly supervisor signals of the Virginian at Princeton, is now supervisor signals of the N&W at Mullens, W. Va. These appointments followed the merger of the two roads on January 1 of this year.

#### Supply Trade News

ALFRED B. MILLER has been named senior consulting engineer in the railway equipment engineering department of Union Switch & Signal Division. Mr. Miller was born in New Buffalo, Pa. He received a B. S. degree in electrical engineering from Pennsylvania State College in 1922, and in 1923 entered the apprentice course at US&S, at Swissvale. In 1924 he was designated service engineer, train control, in the equipment engineering group, and in 1928 development and design engineer. In 1953 he was appointed staff engineer, the position he held at the time of his recent appointment. He is responsible for the design of Union high speed code control equipment.



Alfred B. Miller



Erling Ringstad

ERLING RINGSTAD, manager of Copperweld Steel International Co. since 1944, has been appointed executive vice-president of that company. In addition to selling products manufactured by the various divisions of Copperweld Steel Co., it also markets allied products of other American manufacturers. Mr. Ringstad joined the sales department of Copperweld Steel Co. in 1936. For many years prior to that time he was engaged in transmission and distribution engineering work.

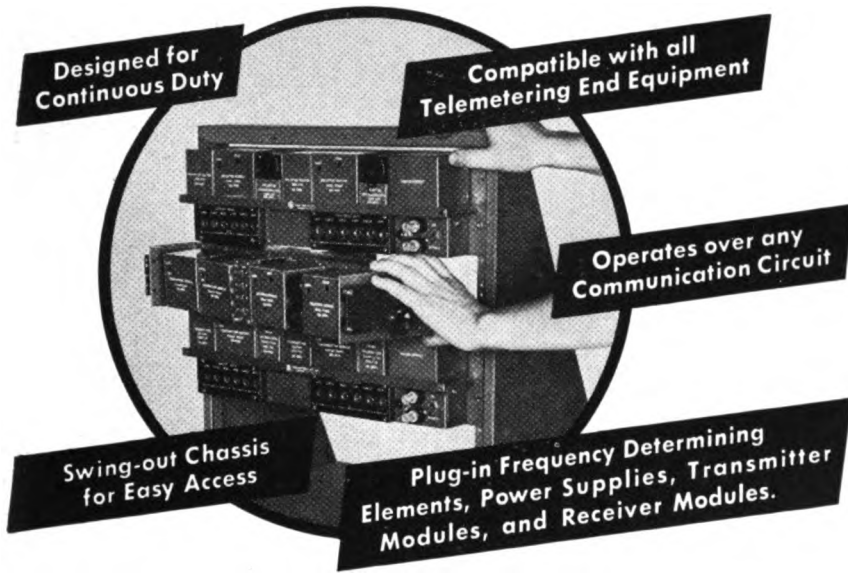
G. N. BURWELL has been elected vice-president of The Rails Co., with headquarters in Maplewood, N.J., and F. W. SCHMIDT has been named district manager at Chicago.

WILLARD A. WOOD has been appointed section engineer, classification yard section, railway project engineering department of Union Switch & Signal

(Continued on page 46)

# Comtel<sup>®</sup> Transistorized Modular Terminal Units

for **TELEMETERING and CONTROL APPLICATIONS**



The Model 1220 and 1220A Carrier Terminals are completely transistorized and may be operated from station batteries from 12 to 130 DC. Plug-in power supply is available for 115-volt AC operation. All components, including amplifiers, frequency determining components, and power supplies are contained in plug-in modules, and may be readily interchanged. As many as 22 high-speed channels are available between 300 to 3000 cps.

## MODEL 1220



The Model 1220 Terminals are normally used in telegraph applications and provide all necessary carrier and loop jack fields, as well as loop current controls. Two transmitters, two receivers, or a transmitter receiver are available on a single 5¼" x 19" chassis. Operates from station battery or 117-volt AC line.

## MODEL 1220A



The Model 1220A Terminals are normally used in telemetering and control applications. The individual modules are mounted on a swing-out chassis and are readily accessible. Four transmitters, four receivers, or two transmitter receivers are available on a single 3½" x 19" chassis. Operates from station battery or 117-volt AC line.

### RFL REPRESENTATIVES:

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W. L. Cunningham, Elmhurst, Ill.  
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Dickerson Eng., Jacksonville, Fla.  
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Telesco International, New York

SEND FOR TECH. DATA — For additional information, including application data, write or phone DE 4-3100. Demonstrations available by local representatives.



## NEWS BRIEFS

(Continued from page 44)

Division. Mr. Wood was born in Ham-monton, N.J. He was graduated from Rutgers University in 1924 with a B.S. degree in civil engineering. In March 1925 he was employed by the US&S Construction Co. and in 1926 was assigned to the project engineering department. He held several positions in that department and was consulting engineer at the time of his recent appointment.

RICHARD H. GRIEBEL has been appointed vice-president and general manager of Kellogg Switchboard & Supply Co., in charge of marketing, engineering and manufacturing for central office equipment and related products.

ALAN C. WALKER, manager of project installations of Lenkurt Electric Co., has been made manager of project engineering, and has been succeeded by GEORGE C. McNEELY, formerly an installation supervisor.

PETER G. SMEE, who has been engaged in microwave engineering for General Electric for several years, has been appointed manager of microwave systems design for GE's Communication Products Department, at Lynchburg, Va.

G. A. NELSON has retired as secretary-treasurer of the Signal Appliance Association and Railway Communications Suppliers Association. He has been succeeded by WALTER H. ALLEN, eastern sales manager of the Frog, Switch & Manufacturing Co.

## Obituary

PETER O. GLADHILL, 73, retired supervisor communications and signals of the Chicago & North Western, died January 15 after a brief illness.

THOMAS W. TIZZARD, resident manager of Griswold Signal Co., died recently. Mr. Tizzard was born in Chicago, February 23, 1908. He was employed in the signal department of the Chicago, Burlington & Quincy from 1929 to 1953, starting as a signal helper and advancing to the position of signal engineer—system. He was resident manager of Griswold Signal Co., at Chicago, since January 1954.

STANLEY C. BRYANT, 79, retired district engineer of General Railway Signal Co., died during December 1959, at Elgin, Ill. He began his career as a signalman on the Chicago & Western Indiana. Before becoming associated with GRS he was signal engineer of L. S. Brach Manufacturing Co.