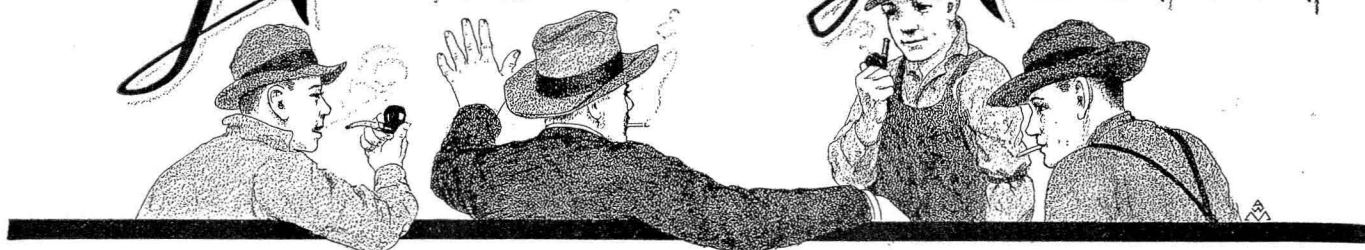


# The News of the Month



The Signal Section, A. R. A., will hold its thirteenth meeting at the Hotel Pennsylvania, New York City, on Wednesday and Thursday, November 14 and 15.

Tables of Transmission Line Constants, by D. D. Ewing, is the title of Bulletin No. 14, recently issued by the Engineering Experiment Station of Purdue University, Lafayette, Ind. Tables and calculations for the derivation of formulae for the computation of transmission voltages and currents are fully explained in this bulletin of 32 pages.

The Interstate Commerce Commission has modified its train control order so as to permit the Richmond, Fredericksburg & Potomac to make its installation of automatic train control, as required by the order, between a point 1.7 miles north of Richmond, Va., and a point 5.7 miles south of Potomac river bridge, Washington, D. C., instead of between Washington, D. C. and Richmond, Va., as named in the order.

On October 10 the Chicago, Rock Island & Pacific observed the seventy-first anniversary of its birth by celebrations in several places, the principal function being a banquet held at Chicago on the evening of the 10th under the auspices of the Rock Island Club. On October 24 somewhat similar activities were held in Chicago by the Chicago & North Western in commemoration of the seventy-fifth anniversary of the opening of that road, the North Western being the first steam railroad to enter Chicago.

In the first six months of 1923, taxes of the Class I roads amounted to \$160,137,804. This is almost \$12,000,000 more than the taxes for the corresponding months of 1922, which amounted to \$148,158,570 and exceeds the amount paid by the railroads in any entire year prior to 1917. In 1913 the taxes were \$118,400,000, the increase since which amounting to about 178 per cent. With the increase in taxes, the difference between the amount of taxes paid in and the amount of dividends paid has steadily diminished until in 1922 with taxes amounting to \$304,885,000 the total dividends paid amounted only to \$271,577,000 as compared with \$322,300,000 paid in dividends in 1913 when the taxes were \$118,400,000.

Recent Publications of the Bureau of Standards, of the Department of Commerce, include: S468, "Formulas and Tables for the Calculation of the Inductance of Coils of Polygonal Form," by F. W. Grover. Price 10 cents; S469, "Directive Radio Transmission on a Wave Length of 10 Meters," by F. W. Dunmore and F. H. Engel. Price 10 cents; S471, "Methods of Measurement of Properties of Electrical Insulating Materials," by J. H. Dellinger and J. L. Preston. Price 15 cents; S472, "Alternating Current Resistance and Inductance of Single-layer Coils," by C. N. Hickman. Price 10 cents; C141, "Description and Operation of an Audio Frequency Amplifier Unit for Simple Radio Receiving Outfits," Price 10 cents; C142, "Tables of Thermodynamic Properties of Ammonia," Price 15 cents.

British Columbia has been advised to scrap its railways in a report made for the Provincial Government by J. C. Sullivan, consulting engineer and formerly chief engineer of the Canadian Pacific Western Lines. This report states in part that "unless the people of British Columbia are prepared to continue paying from two million to two and a half million dollars a year for ten years on the investment already made

in the Pacific Great Eastern Railway, the whole system should be abandoned." Mr. Sullivan strongly advises against extension of the line and urges abandonment of the section from Quesnel (the present northern terminus, 360 miles from Vancouver) to Prince George. He also recommends abandonment of the line from Squamixly to Clinton, 166 miles, and using the salvage money to build a line from Clinton to Ashcroft.

An outdoor athletic meet was held at Altoona, Pa., on September 22, under the auspices of the Pennsylvania at which about 40,000 persons were in attendance, including 1,500 contestants, all of whom were employees or members of the families of employees who had gained a right to participate in the contest by winning places in elimination contests previously held on each grand division and region. The meet was the biggest ever held by the company. A total of 32 special trains were operated to and out of Altoona to handle the employees and their families from all over the system. There were 64 events in addition to basketball games and at one time 16 employee bands were counted in the stand. Many of the company's principal executives were in attendance.

The Interstate Commerce Commission at a session of Division 1 on October 2, 1923, issued an order to all carriers subject to the act to regulate commerce, for them to furnish block signal and train order statistics not later than January 15, 1924. In its order, the commission sets forth in detail the material it desires to have incorporated in the report. This follows the same general lines of previous reports. Among other things requested, the railroads are asked to indicate whether any form of automatic train stop or cab signal system is in use. Information is also requested as to whether signal observance tests are conducted, and if so, it is asked that a brief description of these tests be given, such as the frequency and number of the tests and the results obtained. The reports are to be complete as of January 1, 1924.

During the last twenty years the Atchison, Topeka & Santa Fe has been appropriating from \$10,000 to \$20,000 a year for the maintenance of a present total of 30 club rooms which it has established and in which it has invested close to a million dollars in construction and upkeep. The most prominent feature of these rooms are the libraries, which are supplied with various kinds of educational and recreational reading matter and are maintained by librarians. Employees not only have free access to these rooms for reading, but have the privilege of ordering books for their own private libraries, which are secured for them at publisher's rates. The recreational work consists of musical, literary and educational entertainment by local and professional talent. The object of maintaining these club rooms is to give employees recreation as well as to bring them into closer and more friendly relations with the management.

The telegraph and signal department officers and employees and their wives of the Allegheny division of the Pennsylvania Railroad held their third annual banquet at the Oil City, Pa., Y. M. C. A. on October 11. The invited guests included W. M. Post, superintendent telegraph and signals; J. J. Rhoads, superintendent of the Allegheny divi-

sion, and W. S. Wilson, division engineer of the Allegheny division, who were the speakers of the evening. Supervisor of Telegraph and Signals E. G. Baumann acted as toastmaster. There were approximately 100 present. The tables were decorated with a miniature telegraph and telephone system complete to the wiring of the poles, telephone booths, towers and signals. A combined program and menu was used, which was tied with red, yellow and green ribbons, representing the colors of the signal lights. During the dinner a number of musical selections were rendered by members present.

The Institution of Railway Signal Engineers of Great Britain held its annual dinner at the Hotel Great Central, London, on October 19. The secretary has sent out the program for the remaining meetings to be held in the Session, 1923-1924. On November 7, a paper on "Signaling Colors," illustrated by lantern slides, will be presented by F. R. Lankshear and A. F. Bound. On December 5, A. E. Hudd will present a paper on "Transient Track Circuits," which will also be illustrated by lantern slides. The next meeting to be held will be on January 9, 1924, when J. Boot will present a paper on "Electrical Signal Machines." The last meeting of the session will be on February 13, 1924, and will be the annual general meeting. On October 3, 1923, W. J. Thorrowgood presented a paper on "Automatic Switchboards at Waterloo, Eastleigh and Southampton." This paper was illustrated on lantern slides and working apparatus. All meetings are held at the Institution of Electrical Engineers, Victoria Embankment, W. C. 2, London.

### Crossing Accident—Contributory Negligence as Matter of Law

The Circuit Court of Appeals, Eighth Circuit, reversing a judgment for plaintiff in the District Court for the Eastern District of Missouri, states the general rule in that jurisdiction to be that "a person who drives upon a track at a highway crossing in front of an approaching train, which he could have seen had he looked, or could have heard had he listened, is in law guilty of contributory negligence, and cannot recover damages from the railroad company." Some cases may be so unusual in their circumstances that the question of contributory negligence should be left to the jury. The driver of a motor truck, struck by a train visible for 375 ft. after he had passed an obstruction 27 ft. from the track, was held guilty of contributory negligence, which was not excused by open gates or the railroad's failure to give signals.—*Wabash vs. Huelsmann*, 290 Fed. 165.

One of the most disastrous wrecks in the experience of the Chicago, Burlington & Quincy occurred at Lockett, Wyo., on September 27, when the sudden collapse of a pile trestle bridge over Cole creek, undermined by unprecedented flood waters, collapsed and hurled a passenger train into the flood waters. Four persons are known to have drowned and over 30 more of the total of 75 persons on the train were unaccounted for following the wreck. The bridge, which was 111 ft. long, gave way, it is believed, when the locomotive was about one-third of the distance across. The locomotive and tender, the mail coach, baggage car, smoking car and the chair car were completely submerged and the first three sleeping cars were partially submerged, leaving only two cars on the track. Rescue work was greatly handicapped by the continuous rain and snow storm and the constantly rising waters, the water in the creek bed, which is ordinarily dry, having risen to such an extent that the creek was over 100 ft. wide at the time of the wreck. The washing out of other bridges and track in the vicinity by floods only last July necessitated the rebuilding of a large portion of the line, which was put out of commission by the disaster at Cole Creek.

### Rock Island Stock for Employees

The Chicago, Rock Island & Pacific has put into effect a plan whereby employees may secure preferred stock on a monthly payment basis. Any employee of the company of more than six months' service may invest in the preferred stock of the railway under this plan. Both 7 per cent and 6 per cent preferred stock may be bought, but the total which may be ordered or carried at any one time must not exceed one

share for each \$300 of annual salary or pension of the employee and shall not exceed ten shares altogether.

The amount to be paid for the stock will be governed by the market price at the time it is purchased. Active employees of six months' service or more will be required to make an initial payment of \$5 a share and a monthly payment thereafter of not less than \$3 a share. Pensioned employees are permitted to buy, and they are not required to make the initial payment of \$5 a share. Ten per cent of the purchase price will be deducted from each monthly pension check.

The company will hold the stock purchased as security for the payments of the balance of the purchase price, which balance will be paid through payroll deductions as authorized by the employee. Interest at the rate of six per cent per annum will be assessed on the unpaid balance, and dividends received on the stock will be applied to the unpaid balance. The employee may make full payment at any time, but contracts of purchase are not transferable. An employee may terminate the contract at any time, when the stock will be sold at the current market price.

## Construction

The Chicago Junction Railway has ordered from the Hall Switch & Signal Company seven sets of Hall Searchlight signals, together with a. c. Universal relays, switch boxes and time releases. The installation is to be made by the railroad company's forces.

The Illinois Central has placed an order with the General Railway Signal Company for one Model 2, improved multiple-unit electric interlocking machine, having 73 working levers and 7 spare spaces, for installation at Champaign, Ill. The order also includes 34 Model 5 switch machines and other materials. Installation will be made by the railroad company's forces.

The Pittsburgh & Lake Erie has placed orders with the Union Switch & Signal Company for 41 position-light high and 49 dwarf signals, with the necessary relays and transformers, for the installation of automatic blocks between Pittsburgh and Brightwood, and between Boston, Pa., and McKeesport. The work will be carried out by the railroad company's signal forces.

The St. Louis-San Francisco has placed orders with the Union Switch & Signal Company for the materials required to equip 66 miles of their line between Afton, Okla., and Monett, Mo., with automatic block signals. A total of 122, Style S signals will be used for this work, together with approximately 280 d. c. neutral relays and 60 switch circuit controllers. The installation will be made by the railway company's regular signal construction forces.

### Union Signals for Chile

The electrification of the Chilean State Railways from Valparaiso to Santiago, 186 kilometers (116 miles) and the Los Andes branch, 49 kilometers (30 miles) additional, it is anticipated will be completed and all trains electrically operated by January 1. The Union Switch & Signal Company has an order for 515 Style R color-light signals for these lines; 1189 a. c. relays, and impedance bonds, track and line transformers and other apparatus for complete track circuit signaling between Valparaiso and Santiago where the signals are semi-automatic and for manual signaling on the Los Andes branch. Check-locking with electrically locked circuit controllers, including complete track circuit control will be installed on the single track portion of the main line. The construction work will be handled by the railway company's forces under the supervision of W. J. Evans.

The Long Island is enlarging the interlocking layout at its Hillside Junction plant. The extensions to this plant will consist of five additional functions, which will be controlled and operated by means of a three-unit interlocked table-lever machine. This machine will be electrically locked with the larger electric interlocking machine now in service. Style M switch movements are being used for the additions, with the new layout to operate under the Type F system of