

Approach lighting circuits extend approximately 4,000 ft. in the approach to each signal, the approach track circuit block joints being opposite the home or distant signal involved. These track circuits are double-rail neutral d-c. track circuits, using Union 2-ohm track relays and two Edison M-1,000 primary cells in multiple for each track circuit. The track leads are single-conductor No. 9 solid copper parkway cable, with Raco bootleg outlets. A. S. & W. stranded bonds of the S-1 type were used in bonding the rail.

The gravel, sand and cement for the foundations was distributed by a work train. Metal forms were used throughout, and the concrete was mixed by hand. The spring switches were installed by the signal forces of the Seaboard Air Line, using two gangs.

The first gang, consisting of a foreman and four men, went through first mixing concrete, stringing all the necessary line wire on the existing pole line and bonding the rail. Later this gang, combined with another consisting of a foreman and eight men, installed the spring switches complete with plates and braces. A camp train was used, all the necessary material for all 12 installations being carried through on the train, rather than having the material shipped to each individual point. With this method of organization, a complete spring switch installation was made every 1½ days.

New Flamenol Cable

A NEW synthetic insulating compound has been recently introduced commercially by the General Electric Company under the trade name of "Flamenol." While similar to rubber in its characteristics, it contains no rubber and will not support combustion.

Termed the most radical cable development in the last 25 years, Flamenol is entirely different from any insulation previously available. In addition to being non-combustible, it is highly resistant to moisture, acids, alkalis and oils. It has excellent aging characteristics and is strong mechanically.

Flamenol-insulated cable is recommended for power and control circuits at 600 volts and less, and for

operation at a maximum copper temperature of 60 deg. C. It is well adapted to switchboard wiring and battery and coil leads. Flamenol has a permanently smooth finish and foreign materials do not readily adhere to its surface. It is available in a

variety of colors for circuit tracing. For most applications Flamenol is used without any protective finish, such as braid, lead or armor. It is only where the cable will be subjected to extreme mechanical abuses that such a finish is necessary.

J. C. Mock Retires

JAMES CURTIN MOCK, whose retirement on June 1 as signal electrical engineer of the Michigan Central was



J. C. Mock

announced in the June issue of *Railway Signaling*, was born June 1, 1866, at Kylertown, Pa. He attended public school until 1882 and Claire Academy until 1883. Upon the completion of a four year course in mechanical engineering at Pennsylvania State College in 1890, Mr. Mock entered the service of the Union Switch & Signal Company as construction foreman and designer. Six months later he was notified to report in New York, where the installation of the electro-pneumatic interlocking plant at Jersey City Terminal, for the Pennsylvania, had just begun. This was the second terminal of any size to be installed with power interlocking, and the first of the electro-pneumatic type.

After the completion of the Jersey City interlocking, Mr. Mock was employed on the Broad Street Terminal at Philadelphia, the Coleman lock and block signaling on the New York Central, and on the installation of improved devices on the electro-pneumatic interlocking and block signaling on the Harlem division of the New

York Central. This, with work on the North Station, Boston, and on automatic block signals on the Michigan Central, the Delaware, Lackawanna & Western, and the Central Railroad of New Jersey, rounded out a 10-year period with the Union Switch & Signal Company. The intervening time from the end of one construction job until the beginning of the next was spent at Swissvale on estimates, circuits, revising and improving designs and bringing out new designs.

On July 10, 1901, Mr. Mock was appointed signal engineer of the Michigan Central. Not many signalmen realize that the Michigan Central was one of the few roads in America that had a signal engineer 36 years ago, and Mr. Mock states that at the time he took that position he believes the Michigan Central had more automatic block signals and more interlocked crossings than any other road, with the possible exception of the Pennsylvania.

In 1906 Mr. Mock was appointed electrical engineer of the Detroit River Tunnel Company, and here encountered an entirely new set of difficulties to be surmounted. His versatility is illustrated by the way he turned from signal engineering to electrical engineering and by his grasp of operating conditions on this work. The power installation for the tunnel has provision for almost any conceivable failure or emergency. After the completion of the tunnel construction in 1912, he was reappointed signal engineer, while still retaining the duties of electrical engineer.

Mr. Mock was chairman of the New York Central System Signal and Train Control Committee from 1905 to date. He was also active in association work, having been president of the Signal Club in 1906 and president of the Railway Signal Association in 1907. Mr. Mock is past chairman of Committees VI and X of the Signal Section, A.A.R., and is a present member of these committees.