B. & M. Installs
Either-Direction Signaling
in Hoosac Tunnel

Extensive rearrangement program carried out to expedite traffic through electrified five-mile tunnel

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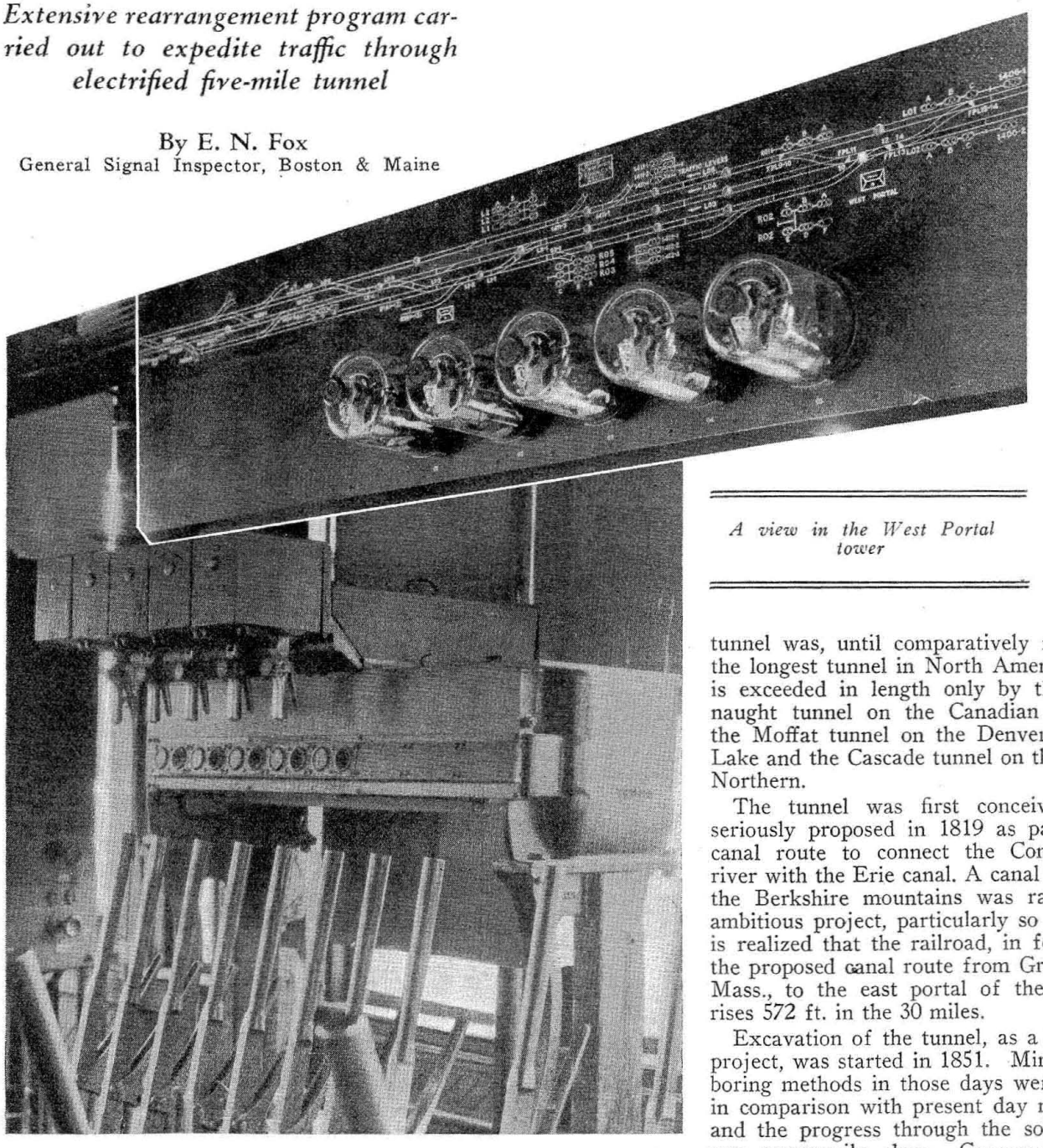

A view in the West Portal tower

IN order to expedite train movements, the Boston & Maine has recently installed a new signal system through the Hoosac tunnel. Trains are now operated by signal indication, in either direction, on each track through the tunnel and also in either direction on the tracks in the electrified territory adjacent to the tunnel. The Hoosac tunnel is located 136 miles west of Boston, Mass., on the main line of the Fitchburg division, which extends from Boston to the western gateways of the Boston & Maine; namely, Troy, N. Y., Mechanicville and Rotterdam. The double track extends through the tunnel, which is nearly five miles long. The Hoosac tunnel was, until comparatively recently, the longest tunnel in North America, and is exceeded in length only by the Connaught tunnel on the Canadian Pacific, the Moffat tunnel on the Denver & Salt Lake and the Cascade tunnel on the Great Northern.

The tunnel was first conceived and seriously proposed in 1819 as part of a canal route to connect the Connecticut river with the Erie canal. A canal through the Berkshire mountains was rather an ambitious project, particularly so when it is realized that the railroad, in following the proposed canal route from Greenfield, Mass., to the east portal of the tunnel, rises 572 ft. in the 30 miles.

Excavation of the tunnel, as a railroad project, was started in 1851. Mining and boring methods in those days were crude in comparison with present day methods, and the progress through the solid rock was necessarily slow. Consequently, it was 23 yr. later, on November 27, 1874, when the east and west headings met. The error in levels between the two headings was only $\frac{9}{16}$ in., a remarkable feat of engineering. The first train passed through the tunnel on February 9, 1875.

The tunnel is level for about 1,650 ft. in the vicinity of the central shaft. Approaching this level stretch from either portal, there is an ascending grade of 0.5 per cent. The track at the center is 66 ft. higher than at East Portal and 56 ft. higher than at West Portal. The dimensions of the central shaft are 15 by 27 ft., with a depth of 1,028 ft. It is now used for ventilation, a large