

AUTOMATIC BLOCK SIGNALS

AND

SIGNAL CIRCUITS

AMERICAN PRACTICE IN THE INSTALLATION AND
MAINTENANCE OF SIGNALS ELECTRICALLY
CONTROLLED, AND OPERATED BY
ELECTRIC OR OTHER POWER

WITH DESCRIPTIONS OF THE ACCESSORIES NOW
REGARDED AS STANDARD

BY
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To My

BELOVED BROTHER

HUGH EMMOTT SCOTT

PREFACE.

THE evolution of a mechanical art results in the simplification of its apparatus. The less the number of subsidiary devices employed, and consequently the greater the number of their independent functions, the higher the state of this art. Signaling accessories, although of rapid development, have not as yet undergone the usage test that is the prerequisite to standardization and the elimination of impracticable differentiated structures. In surveying the heterogeneous types of construction employed in the signal equipment of a representative railroad system, the difficulty of selection and representation, with respect to relative significance, becomes apparent.

In a book of this character, it is extremely difficult to intelligibly exhibit continuous circuits of any great complication, owing to the restricted space available for illustrations, insets not having been resorted to. The history of signaling is not touched upon, as it is irrelevant to the character of the present work. Railroad terms have also been omitted, as they are meaningless to the average reader.

All-electric interlocking, a natural development of the older mechanical and electro-pneumatic interlocking, is given the attention that its importance merits. Electric railway signals are described as fully as seems advisable, since they are in a transitory state of rapid progress. Electro-gas and three-position signals, representing the highest development of the art in America, have been treated not only from an electrical standpoint, but also from a structural point of view.

This book is intended for the signal and railway engineer, the electrician, and the layman; and it is modestly hoped that it will appeal to all in any way concerned with signaling.

The old argument of normal danger *vs.* normal clear is not taken up; nevertheless, data on both these systems of indication is given throughout the book, the reader being left to his own conclusions as to their relative merits.

The writer wishes to acknowledge several courtesies received from the signal companies whose products have of necessity been described, and also to Messrs. H. S. Balliet, J. C. Jones, B. H. Mann, M. E. Smith, W. W. Slater, and A. J. Wilson.

Criticisms are respectfully invited.

R. S.

WILKESBARRE, PA.

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