

RAILWAY TRACK AND TRACK WORK.

BY

E. E. RUSSELL TRATMAN,

A. M. AM. SOC. C. E., ASSOCIATE EDITOR OF "ENGINEERING NEWS.

WITH OVER 200 ILLUSTRATIONS.

THE ENGINEERING NEWS PUBLISHING CO.
NEW YORK.

TABLE OF CONTENTS.

PART I.—TRACK.

Chapter 1.—Introduction.

The Importance of the Track, Relations of Track to Traffic.

Chapter 2.—Roadbed Cross Sections.

Chapter 3.—Ballast.

Broken Stone, Slag, Burnt Clay, Gravel, Cinders, Sand, Earth.

Chapter 4.—Ties and Tie-Plates.

Qualities of Wood for Ties, Tie-Renewals, Preservative Processes, Metal Tie-Plates, Metal Ties.

Chapter 5.—Rails.

History, Form of Section, Foreign Rails, Manufacture, Life and Wear.

Chapter 6.—Rail Fastenings and Rail Joints.

Spikes, Screws, Bolts, Rail Braces, The Design of Rail Joints, Angle Bars, Suspended and Supported Joints, Track Bolts, Nutlocks, Quantities of Track Material.

Chapter 7.—Switches, Frogs and Switchstands.

Stub Switch, Split Switch, Miscellaneous Forms of Switches, Rigid Frogs, Spring Rail Frogs, Frog Substitutes, Crossing Frogs, Guard Rails, Footguards, Relation of Wheels to Frogs and Switches, Switch Ties and Timbers, Switchstands, Lamps.

Chapter 8.—Fences and Cattleguards.

Board and Wire Fences, Hedges and Walls, Station and Yard Fences, Snow Fences, Pit and Surface Cattleguards.

Chapter 9.—Bridge Floors and Grade Crossings.

Solid and Open Floors, Trestle Floors, Bridge Guard Rails, Elevated Railway Floors, Road and Street Crossings, Track Crossings, Crossing Gates and Derailing Devices.

Chapter 10.—Track Signs.

Chapter 11.—Tanks and Other Track Accessories.

Tanks, Track Tanks, Water Columns, Coaling Stations, Ashpits, Turntables and Transfer Tables, Track Scales, Bridge Tell-Tales, Mail Cranes, Bumping Posts, Spare Rails, Section Houses and Other Buildings, Station Platforms.

Chapter 12.—Sidetracks and Yards.

Lap Sidings, Design and Operation of Yards and Terminals, Sand Tracks.

Chapter 13.—Track Tools and Supplies.

PART II.—TRACK WORK.**Chapter 14.—Organization of the Maintenance - of - Way Department.**

Systems of Organization, Engineers as Roadmasters, Duties of Roadmasters, Section Foremen, Trackwalkers and Watchmen, Force and Labor, Work Train Conductors, Bridge and Building Department.

Chapter 15.—Tracklaying and Ballasting.

Ordinary Tracklaying, Machine Tracklaying, Distribution of Ballast, Ballast Cars.

Chapter 16.—Drainage and Ditching.

Drainage of Wet Ground and Slopes, Protection of Slopes, Ditching and Ditching Machines, Subdrainage.

Chapter 17.—Track Work for Maintenance.

General Work on the Section, Work for Different Seasons, Lining, Gaging, Surfacing, Renewing Ties, Tamping, Raising Track, Moving Track, Handling Rails, Relaying Rails, Shifting Rails on Curves, Bending and Cutting Rails, Spiking, Bolting, Shimming, Fencing, Clearing Right of Way, Cutting Weeds, Policing, Station Grounds and Buildings, Old Material.

Chapter 18.—Gage, Grades and Curves.

Change of Gage, Widening Gage on Curves, Compensation of Grades, Vertical Curves, Superelevation on Curves, Sharp Curves, Transition Curves, Superelevation of Curves on Bridges.

Chapter 19.—Track Inspection and the Premium System.**Chapter 20.—Switch Work.****Chapter 21.—Bridge Work and Telegraph Work.****Chapter 22.—General Improvements.**

Changes in Alinement and Grade, Filling Trestles, Ballast and Work Trains.

Chapter 23.—Handling and Clearing Snow.**Chapter 24.—Wrecking Trains and Operations.****Chapter 25.—Records and Reports.**

Information Charts, Blank Forms for Reports.

Appendix No. 1.

Tables of Standard Track Construction on 50 Railways.

Appendix No. 2.

Table of Train Speeds and Distances Run.