CONTENTS

Acknowledgments ix

1 The Railroad Industry (as Seen through Accidents) 1

2 How Trains Crash, Then and Now 9

3 Moderate-Speed Passenger Train Collisions 23

4 Freight Train Collisions 47

5 Avoiding Collisions 65

6 Positive Train Control 100

7 Moving at the Wrong Speed 123

8 Bearing Failures 156

9 Gravity: It’s the Law 190

10 More Runaways: Brake Failure 225

11 Broken Rail 257

12 Buckled Track 281

Epilogue: Safety in the Modern Era 304

Notes 307

References 317

Index 351