

INDEX

Tenth Volume—January, 1917, to December, 1917

GENERAL INDEX

[Illustrated articles are indicated thus*. Editorials are indicated thus†]

A

- Accidents:
 - Jury Blames Auto Driver..... 243
 - I. C. C. Statistics:
 - Fiscal Year 1916.....†66, 121
 - Investigations 7
 - July, August and September, 1916 190
 - October, November and December, 1916 315
 - Monthly Summaries:
 - November, 1916 8
 - January, 1917 97
 - March and April, 1917.....287, 347
 - Mt. Union Collision.....120, †163, 184
- Adamson Law:
 - Arguments Finished Before Supreme Court 61
- Adjusting Motor Car Wheels to Prevent Climbing*112
- Adjustment and Maintenance of Relays 174
- Adjustment of Switch Box Contacts.. 244
- Advantages of Signaling:
 - Studying†352
- A. G. A. Railway Light & Signal Company:
 - Flashlight Crossing Signal.....*159, *346
 - Signal Supply News.....64, 284, 349, 383
- Air-Compressor Control Panel.....*128
- Alabama Great Southern:
 - Awarded Harriman Memorial Medal 222
 - Construction News 282
- Alabama & Vicksburg:
 - Construction News 190
 - Personal Mention62, 99, *251
- Alexander, Thomas Charles:
 - Let Signals Help..... 3
- Alternating Current Signaling:
 - New Installations:
 - C., M. & St. P. Electric Zone.....*256
 - C., R. I. & P. Chicago Terminal Division*67
 - Norfolk & Western.....*135
 - Terre Haute, Indianapolis & Eastern*330
 - Successful Use on the Southern...*302
- Alternating Current Track Circuits:
 - Grounds Through Relay and Transformer*186
- Aluminum Cable:
 - Use on the Southern..... 305
- American Electric Railway Association:
 - Annual Conference 315
 - Fall Meeting 250
- American Gear Manufacturers' Association:
 - Signal Supply News.....130, 192
- American Museum of Safety:
 - Brady Medal to Connecticut Company 129
- American Railroad in France:
 - Signaling on†253, †351
- American Railway Association:
 - Participation of Railways in the War 141
 - Use of Standard Code and Rules.. 281
- American Railway Engineering Association:
 - Report of Committee X..... 129
 - Ammeter, Use in Signaling..... 114
- Ampere-Hour Meter:
 - Application in Signaling.....*125
- Anaconda Copper Mining Company:
 - Construction News 129
- Anderson, B. T.:
 - New D., L. & W. Interlocking at Buffalo*321
- Anderson, James:
 - Adjustment and Maintenance of Relays 174
 - Automatic Block Signal Maintenance 338

- Battery Maintenance in Signal Service*145
- Care of Oil and Electric Signal Lamps 306
- Essentials of Track Circuit Maintenance 211
- Maintaining Line Circuits to Standard*233
- Maintenance of Mechanical Interlocking*370
- Organization for Signal Maintenance 73
- Principles of Electric Locking...*49
- Safety First on Motor Cars.....*111
- Tools and Instruments for Maintainers*113
- A. P. B. Signalling:
 - Louisville & Nashville.....*19
 - Salt Lake Route.....*367
 - Special Circuit for Tonnage Signal Terre Haute, Indianapolis & Eastern*369
- Argument for Rule G..... 243
- Association of Railway Electrical Engineers:
 - Paper on Position-Light Signals.. 31
- Association of Railway Telegraph Superintendents:
 - Annual Convention 250
 - Chicago Meeting 358
 - Date of Annual Meeting Changed.. 156
 - Special Meeting 347
 - Western Division Meeting..97, 124, 154
- Atchison, Topeka & Santa Fe:
 - Automatic Flagman in Center of Street*158
 - Construction..31, 98, 161, 190, 223, 282, 348
 - Equalizing Specific Gravity in Storage Battery 314
 - Motor Car Operation..... 139
 - Personal.....98, 223, 315, 349
- Atlanta & West Point:
 - Construction315, 347
 - Personal348, 383
- Atlantic Coast Line:
 - Construction31, 97, 222
 - Instruction for Motor Car Operation 112
 - Personal62, 223, 284
 - Standard Semaphores for Highway Crossing Signals*153
- Auger Bits, Extension*378
- Autoflags:
 - New Bryant Zinc.....*248
 - On Bascule Bridge.....*204
- Automatic Flagman:
 - In Center of Street.....*158
 - U. S. & S. Three-Aspect.....*29
- Automatic Lamp-Out Indicator..... 60
- Automatic Signals:
 - Completed, Under Way and Contemplated January 1, 1917..... 9
 - Economies Effected by.....†193, 333
 - Increase in Single-Track Mileage..†2
 - Maintenance 338
 - New Installations:
 - Chicago Great Western.....*118
 - Chicago, Indianapolis & Louisville*105
 - C., R. I. & P. Chicago Terminal*67
 - Illinois Central*179
 - Louisville & Nashville.....*19
 - Montreal & Southern Counties*55
 - Norfolk & Western.....*135
 - Salt Lake Route.....*367
 - Southern*302
 - Relation to Total Track Mileage..†318
 - Service of One English Installation 178
 - Speeding Up Freight Trains..... 210
- Automatic Sub-stations on C., R. I. & P.*68
- Automatic Train Control:
 - An Old Question in Another Form †286
 - Application on I. R. T. Elevated...*290
 - New System on Great Eastern of England*323

- Recommendation of I. C. C. Division of Safety.....7, †1
- Recommendation in I. C. C. Report†163, 184
- Report on Wooding Automatic Stop*311
- Webb System on the New Haven.....*151
- Auxiliary Messenger Wire for Repairing Cable 345

B

- Baggerman, G. L.:
 - Maintainin' Work in Winter..... 48
- Bagley, F. H.:
 - Hold-Main Signals Installed by L. & N.*108
 - Single-Track Automatics on the L. & N.....*19
- Balliet, H. S.:
 - Pronounced Indications Needed... 195
- Baltimore & Ohio:
 - Construction News31, 62
 - Motor Car Rules..... 141
 - Personal*251, 382
 - Record for Train Operation.....134, 189
 - Work of Safety-First Bureau..... 156
- Bastian, H. S.:
 - Remodeling an Electric Interlocking*241
- Battery:
 - New 60-Day Storage Cell..... 249
- Battery Boxes, Concrete.....*19, *246
- Battery Charging Set:
 - Standard on I. R. T.....*30
- Battery Elevators:
 - Canvaste for Covering Flexible Wire*123
 - Special Terminal for.....*345
- Battery Maintenance in Signal Service*145, 287
- Battery Records*345
- Battery Scoop 114
- Battery Testing Cabinet.....*122
- Battery Vaults Made with Cement Gun*220
- Bayer, O.:
 - Maintainer's Tools 4
- Beall, C. R.:
 - Application of the Oscillograph...*75
- Bending Bond Wires.....*157
- Beoddy, J. A.:
 - A. C. Signals on the N. & W.....*135
- Bezer, Henry:
 - Highway Crossing Signal Indications 229
- Bingham, R. C.:
 - New Illinois Central Installations..*179
- Block Instruments on New South Wales Railways 87
- Block Signal Mileage in Service..... 9
- Bonding Drill, Level Surface for..... 344
- Bonding Rails 211
- Bond Wire Protectors.....*378
- Bond Wires:
 - Bender*157
 - Breakages 288
 - Connector*221
 - Keeping from Rusting..... 158
 - Quality of 200
 - Storing in Trunking..... 59
- Bootlegs and Track Connections, Maintenance of 214
- Boston & Albany:
 - Advance in Wages..... 222
 - New Electric Interlocking at Pittsfield, Mass.*171
 - Personal Mention 162
- Boston & Maine:
 - Construction97, 347
 - Personal223, 251
- Boston Elevated:
 - Construction News 190
- Boston, Revere Beach & Lynn:
 - Construction 347

Box for Holding Fuses.....	*158
Brach Supply Company, L. S.: Combination Lightning Arresters..	*160
Curtain Gravity Signal.....	*96
Maxohm Adjustable Resistance Unit	*160, 187
"Out of Order" Signal.....	*125
Signal Supply News.....	99
Bradford-Ackerman Corporation: Signal Supply News.....	100
Bradley, E. E.: Operating Motor Cars as Extra Trains	36
Brass, Cleaning	27
Bridge Interlocking on the Chicago & North Western	*201
British Railways: Accident Records	222
Broken Rail Protection.....	23, 104
Bryant Zinc Company: New Autoflags	*248
Signal Supply News.....	100
Buffalo, Rochester & Pittsburgh: Construction.....	61, 97, 129, 223
Kinks Developed in the Signal De- partment	*122
Personal Mention	98
Telegraphers' School	31
A. M. Byers Company: Signal Supply News.....	162
Byrnes, R.: Snow Handling on a Busy Ter- minal Division	46

C

Cable Hangers Used on C. & A.....	*232
Camera: Type Suited for Signalmen.....	*300
Canadian Northern: Personal Mention	161
Canadian Pacific: Construction	222
Periscopes in Interlocking Tower..	*288
Personal	62, 250
Standard Lamps	*26
Canvaste Cord for Wiring Battery Elevators	*123
Care of Oil and Electric Signal Lamps	306
Cargile, C. B.: Maintainer's Tools	4
Wire Joints	*255
Case, D. M.: Motor Car Rules.....	166
Caustic Soda Battery: Application and Maintenance.....	145
Cement Mixing Board.....	*273
Central Electric Railway Association: Summer Meeting Canceled.....	190
Central of Georgia: Construction	281
Personal	191, 283
Ceylon Government Railways: Staff Station Without Attendants..	*305
Chesapeake & Ohio: Construction.....	31, 61, 282, 315, 382
Personal	62, 161
Chicago & Alton: Construction News	129
New Electric Interlocking at Cor- with	*230
Chicago & Eastern Illinois: Personal News	223
Chicago & Illinois Midland: Construction News	161
Chicago & North Western: Bascule Bridge Interlocking at Deering, Ill.	*201
New Interlocking Plant at Allis, Wis.	*267
Personal Mention	130
Safety Bulletin	222
Wage Increases	129
Chicago, Burlington & Quincy: Construction.....	31, 61, 223, 250, 315
Personal.....	62, 99, 348
Safety Record	129
Chicago Great Western: Construction News	281
New Automatic Signals.....	*118
Personal	284
Chicago, Indianapolis & Louisville: Application of a Standard Sema- phore to Highway Crossing Protection	*154
New Automatic Signals.....	*105
Personal	283
Chicago Manufacturing & Welding Co.: Housed Switch Adjustment.....	*280
Chicago, Milwaukee & St. Paul: Construction.....	31, 222, 347
Extension of Electrification	60
Light Signals in Electrified Zone..	*256
New Interlocking Plant at Allis, Wis.	*267
Personal Mention	99, 283
Chicago, North Shore & Milwaukee: Construction News	161
Chicago Railway Signal & Supply Company:	

Signal Supply News.....	32, 99, 100, 383
Style G Locomotive Type Crossing Bell	*310
Wigwag Signals on an Electric Line	*380
Chicago, Rock Island & Gulf: Personal Mention	62
Chicago, Rock Island & Pacific: Installation of Conduits in Retain- ing Walls	*72
Personal	283
Signaling on the Chicago Terminal	*67
Cincinnati, Hamilton & Dayton: Personal	250
Cincinnati, New Orleans & Texas Pa- cific: Construction News	62, 282
Cleaning Brass	27
Cleaning Mechanical Locking.....	58
Cleveland, Cincinnati, Chicago & St. Louis: Construction News	222, 315
Personal	383
Cleveland Twist Drill Company: Ezy-Out Screw Extractor Set....	*60
Signal Supply	349
Cleveland, W. D.: How Portland, Ore., Uses Railway Signals	*95
Clock-Work Disc Signals: Maintenance	341
Cloud, W. D.: Motor Car Operation.....	255
Coleman Railway Supply Co.: New Bond Wire Connector.....	*221
Signal Supply News.....	224
Combined Organization in the Signal Department	73
Common Wire Terminal.....	*59
Comparative Negligence, Court Find- ing	57
Concrete Battery Boxes: Leakage in	288
Sectional	*246
Use on the L. & N.	*19
Concrete Foundation and Battery Case	*246
Concrete Poles Made by Centrifugal Process	155
Concrete Towers	*226, *239
Conduit Entrance for Switch Boxes..	*219
Conduit Installations in Retaining Walls	*72
Confessions of An Ex-Maintainer.....	88, 205, *364
Connecticut Company Received Brady Medal	129
Conserving the Largest Item of Main- tenance Expense	*102
Contact Spring Adjuster.....	114
Contest on Appliances Exhibition..	*134, *166
Contributory Negligence in Crossing Accidents	129
Control Panels for Air Compressors..	*128
Corning Glass Works: Signal Supply News.....	192
Cost: Lighting Signal Lamps.....	245
Signal Maintenance and Operation on the Southern.....	304
Signal Maintenance in England..	178
Stopping Trains	*131
Cranks, Tightening	*59
Crossed Wires Cause Unusual Trouble	*377
Crude Oil for Pipe Lines.....	247
Curtain Gravity Signal.....	*96

D

Dallas Union Terminal Interlocking...	*37
Dampness, Keeping Out of Signal Cases	29
Daylight Semaphore Lanterns.....	*187
Day Meetings of Regional Committees	*3
Delaware & Hudson: Construction News	161, 222
Personal Mention	161, 284
Delaware, Lackawanna & Western: Construction News	31, 62
New Interlocking at Buffalo.....	*321
Personal Mention	162, 224
Tests on Wooding Automatic Stop	*311
Denver & Rio Grande: Shooting Insulators to Save Wire Line	*229
Denver, Laramie & Northwestern: Construction News	161
Denver Union Station Interlocking..	*90, 104
Detroit United Lines: Construction News	31
Development: Electro-Mechanical Interlocking ..	228
Signal Apparatus in 1916.....	9
Dickinson, Leon D.: Denver Union Station Interlocking	*90
Dimensioning Drawings of Signal Lamps	134, *166
Directional Battery: Application in Interlocking on I. R. T.	*290
Dirty Track and the Two-Ohm Relay.	*285

Distant Highway Signals.....	*164
Distant Signal: Enforcing Obedience to.....	*1, 7
Dodge Manufacturing Company: Construction News	161
Dolly Truck Legs.....	*273
Dolph Company, The John C.: Signal Supply News.....	191
Doran & Co., H. G.: Signal Supply News.....	224
Drafting: Making Small Scale Location Plan	*217
Need for Standards.....	*317
Suggestions for Improved Practice	359
Tracing on Blueprints.....	344
Use of Women for.....	*193
Drake, Caleb: Safety and Motor Cars.....	195
Drill Grinding	113
Driver Blamed for Auto Accidents...	243
Dry Cells: Application and Maintenance.....	145
Duluth, South Shore & Atlantic: Construction News	61, 382
Duluth, Winnipeg & Pacific: Personal	348
Dunham, C. A.: Motor Cars Rules Must Fit Condi- tions	112
No Entertainment at Annual R. S. A. Meeting	227
Public Must Observe Crossing Sig- nals	287
Dwarf Signals, Moving.....	*377

E

Earhart, C. E.: Two New Illinois Central Installa- tions	*179
Eastern Roads Merge.....	*1352
East Indian Railway, Train Operation	215
Economics of Signal Labor.....	*102
Economics of Signaling..	*131, *193, 210, 333
Edison, Inc., Thomas A.: Signal Supply	252
Edison Storage Battery Co.: Signal Supply.....	251, *252, 284, 349
Electrical Supplies for Swiss Railways	266
Electric Fouling Bars, Use in England	*362
Electric Interlocking: New Installations: Boston & Albany.....	*171
Chicago & Alton at Corwith..	*230
Chicago & North Western.....	*201
C. & N. W. at Allis, Wis.....	*267
Denver Union Station.....	*90
New York Central at Utica, N. Y.	*79
Norfolk & Western.....	*137
Electric Locking: Details in Electric Plant at Allis, Wis.	270
Novel Circuit	*102
On the Chicago Great Western..	*119
Principles of	*49
Electric Storage Battery Company: Portable 60-Day Battery.....	249, 280
Signal Supply News.....	162
Electro-Gas Signals: Maintenance	340
Electro-Mechanical Interlocking: Early Development	228
Early Installations of.....	35
Increase in Use of.....	*12
New Installation: D. L. & W. at Buffalo.....	*321
Electro-Pneumatic Interlocking: New Installations: Dallas Union Terminal.....	*37
Interborough Rapid Transit...	*289
Pacific Electric Terminal.....	*142
Electro-Pneumatic Signals: Maintenance	341
Elgin, Joliet & Eastern: Personal Mention	31
Eliminating Residual Magnetism..	*246, *253
El Paso & Southwestern: Construction	61
Personal	31
Emery Wheels for Maintainers.....	113
Enclosed Disc Signals: Maintenance	341
Enforcing Action at the Distant Sig- nal	*1, 7
English Automatic Signaling.....	178
Equalizing Specific Gravity in Storage Battery	314
Equipment Ordered in 1916.....	*12
Erie: Construction	97
Personal.....	32, 99, 162, 283, *315, 383
Essentials of Track Circuit Main- tenance	211
Everett Multiple-Coil Resistance Units	*189
Examples in Battery Engineering.....	227
Experiences of a Future Signal Engi- neer	*329
Exploring Coil, Use in Signaling.....	115
Extension for Auger Bits.....	*378
Ezy-Out Screw Extractor Set.....	*60

F

Failure Record:	
On Pennsylvania	4
Signal and Light	*103
Fairbanks, Morse & Company:	
Power Plants for Hand Cars	*30
Fairfield, H.:	
A Switch Adjustment Cover	*6
Fargo Manufacturing Company:	
Signal Supply News	63
Federal Signal Company:	
Signal Supply News	130
Fiber, Insulating:	
Methods of Manufacture	*326
On Impedance Protector Blocks	*27
Tests on	†65, 86
Fiber Conduit:	
Methods of Manufacture	*327
Use in Retaining Walls	*72
Field Work Can Be Reduced	†164
Files, Re-Cutting	113
Fire Apparatus, Protection by Rail-	
way Signals	*95
Fire Protection for Motor Cars	344
Fiscal Year:	
To End December 31	†1, 31
Flagging Protection for Broken Rails	24
Flashlight Crossing Signals	*159, *346
Folding Horse for Wire Reels	*273
Folding Ladders	*28
Fort Smith & Western:	
Construction News	61
France:	
Signalling the American Railroad	†253
Freeman, C. K.:	
Dimensioning Drawings of Signal	
Lamps	*166
Freight Rate Advances Asked	129
Freight Train Time, Improving by Au-	
tomatic Signals	210
Fugina, A. R.:	
Does Committee VII Receive	353
Proper Support?	
Fuse Holder	*158
Fuse Renewing Panel	*123
Fuse Tester	*344

G

Gage for Gasolene Tanks	*157
Galena Signal Oil Company:	
Signal Supply	251
Galvanometer, Use in Signaling	114
Galvanometer Relays, Method of	
Avoiding Chattering	245
Galveston, Harrisburg & San Antonio:	
Construction News	222
Gasolene Pipes:	
Making leakproof	344
Gasolene Pumps for Battery Charging	
Engines	186
Gasolene Tank Gage	*157
Gemmell, A.:	
Installation of Trunking and Cap-	
ping	*41
Labor Saving Devices for the Con-	
struction Gang	*273
Residual Magnetism	*354
Signal Maintenance in Winter	*6
General Electric Company:	
Air Compressor Control Panels	*128
Signal Supply	192, 224
Standard Battery Charging Set	*30
General Railway Signal Company:	
Flag Raising	190
Signal Supply News	99, 191, 192
General Railway Signal Company of	
Canada, Ltd.:	
Signal Supply News	192
Georgia Railroad:	
Construction	347
Gongs for Motor Cars	36
Gould Storage Battery Company:	
Signal Supply	284
Grand Central Terminal:	
Celebrating for a Prospective	
Bride	*216
Grand Rapids & Indiana:	
Personal	*251
Grand Trunk:	
Construction	31, 61, 62, 190, 347
Personal	62
Grand Trunk Pacific:	
Personal	382
Gravity Batteries:	
Application and Maintenance	146
Gray & Sons, Peter:	
New Daylight Semaphore Lanterns	*187
Great Northern:	
Construction	347
Practice in Operation of Motor	
Cars	112
Greenfield Tap & Die Corporation:	
Signal Supply News	99
Gunnite Battery Vaults	*220

H

Habirshaw Electric Cable Company:	
Signal Supply News	130
Hall Switch & Signal Company:	
Signal Supply	252

Handling Material for Signal Mainte-	
nance	274
Harriman Memorial Medal:	
Awarded to Alabama Great South-	
ern	222
Hayes Track Appliance Company:	
Signal Supply News	192
Hazard Manufacturing Company:	
Signal Supply	191, 224, 284
Headlights:	
Interstate Commerce Commission	
Order Modified	133
Henderer's Sons, A. L.:	
Signal Supply News	99
Highway Crossing Protection:	
Act of Tennessee Legislature	281
Are Distant Highway Signals	
Sufficient?	†164
Bells Installed on the Chicago	
Great Western	120
Cautionary Signs in Connecticut	281
Cheap Warning on Electric Roads	275
Flashlight Crossing Signals	*159, *346
Gates Close at Night in New York	255
Hoeschen Motor-Winding Mechan-	
ism	*159
Many Bells Being Installed	*31
National Association of Railway	
Commissioners' Report	364
Order of State Public Utilities	
Commission of Illinois	61
Pennsylvania Adopts A. R. A.	
Standard	222
Pronounced Indications Needed	195
Public Must Observe Crossing Sig-	
nals	287
Signal Indications	229
Standard Semaphores for Crossing	
Signals	†132, *153
Warning Signs on the Southern	129
Hoeschen Manufacturing Company:	
New Motor-Winding Mechanism	*159
Holderman Housed Switch Adjustment	*280
"Hold-Main" Signals Installed by L.	
& N.	*108
Houston & Texas Central:	
Construction	222
Personal	161
Hunt & Company, Robert W.:	
Signal Supply News	162
Hydraulic Signal Company:	
Signal Supply News	130
Hydrometer:	
Advantages of New R. S. A.	
Standard	134

I

Illinois Traction System:	
Construction	315
Signal Display at University of	
Illinois Electrical Show	161
Illuminating Engineering Society:	
Paper on Position-Light Signals	96
Impedance Bonds, Layout on Milwau-	
kee A. C. Signals	*258
Illinois Central:	
Application of Crossing Bells	*310
Construction News	98, 161, 190
Personal	223, 250, *316, 348, 349, 382
Safety Record	129
Staff Meeting on St. Louis Divi-	
sion	*219
Two New Automatic Signal Instal-	
lations	*179
Indications:	
For Highway Crossing Signals	229
Pennsylvania Change in Colors	250
Indicator to Show Lamps Out	60
Inspection of Relays	175
Inspection Trip on I. C.	*219
Installation of Trunking and Capping	*41
Institution of Railway Signal Engi-	
neers:	
Annual Meeting	129
Meeting on July 13	250
Instruments for Signal Maintenance	*113
Insulated Joints:	
Bending Bolts	†285
Japanese Translation of Mainte-	
nance Instructions	129
Maintenance of	213
Tests on Insulating Fiber	†65, 86
Insulated Wire:	
Manufacture of	*263
Insulating Tapes and Their Applica-	
tion	380
Interborough Rapid Transit:	
Construction News	31, 98, 190
Fast Time in Building Interlock-	
ing Tower	250
New Interlocking at Rector Street	*289
Standard Battery Charging Set	*30
Subscription to Liberty Loan	
Bonds	222
Interlocking:	
Classification of Plants by Types	†2
Plants Completed, Under Way and	
Contemplated January 1, 1917	9
Semaphore Installed at Walpole,	
Mass., in 1881	*35
Tornado Damages Plant	170

Interlocking Tower:	
Mounted Over Tracks on N. Y.	
Elevated	*291
Periscope for	*288
Interstate Commerce Commission:	
Accident Bulletin No. 62	315
Accident Record for 1916	†66
Adoption of Accident Report by	
States	31
Block Signal Statistics	*206
Change in the Fiscal Year	†1, 31
Decision in Rate Advance Case	221
Division of Safety Annual Re-	
port	7, †1
Division of Valuation Order	281
Instructions for Valuation of Tele-	
phone and Telegraph Property	222
Modification of Headlight Order	133
Progress in Valuation	43
Report on Mt. Union Collision	†163, 184
Report on Western Maryland Ac-	
cident	18
Report on Wooding Automatic	
Stop	*311
Interstate Transfer Railway:	
Construction News	161
Inter-Urban Railway, Des Moines, Ia.:	
Construction	382
Interview with the Towerman	26
Interviews by the Beginner	†255, *263, *326
Introduction to the New Editor	†351
Inventorying Signaling Appliances for	
Valuation Purposes	43

J

Jacksonville (Fla.) Terminal Co.:	
Construction	382
Jacobs, Harry M.:	
Switchboard Panel Supports	*183
Johns-Manville Company, H. W.:	
Signal Supply News	224
Joint in Electric Conductor	236

K

Kansas City Terminal:	
Construction News	190, 281
Kellenberger, K. E.:	
New Editor	†351
Kelloway, C. J.:	
Instructions for Motor Car Opera-	
tors	112
Kentucky Engineering & Efficiency	
Association:	
Signal Supply	251
Kerosene Torch for Snow Melting	*47
Kettle River Company:	
Gunnite Battery Vaults	*220
Signal	284
Key, Repairing Loose	*379
Key Ring and Holder	*28
Kirley, George A.:	
New B. & A. Electric Interlocking	
at Pittsfield, Mass.	*171

L

Labor:	
Economizing	†164
Labor Saving Devices for the Con-	
struction Gang	*273
Ladder, Folding	*28
Lamp:	
Design Adopted by Canadian Pa-	
cific	*26
Dimensioning Drawings	134
Lighter	*158
Maintenance	306
To Warm Battery Tubs	218
Lascelles, T. S.:	
Early Electro-Mechanical Inter-	
locking	35
New Train Control System on the	
Great Eastern of England	*323
Use of Electric Fouling Bars in	
England	*362
Walpole, Mass., Interlocking	*35
Lay of the Hobo	361
Lehigh & New England:	
Construction News	61
Lehigh Valley:	
Construction News	281
Study of Electrification	156
Let Signals Help	3
Level for Semaphore Blade	*28
Lifting Battery Chutes	*273
Light in Battery Wells	186
Lighting Signal Lamps on the Ap-	
proach of a Train	*127
Light Signals:	
Maintenance	341
New Installations:	
Chicago, Milwaukee & St. Paul	*256
Montreal & Southern Counties	
Railway	*55
New York Elevated Interlock-	
ing at Rector Street	*289
Pacific Electric Terminals	*142
Performance on Pacific Elec-	
tric	245
Southern Pacific	*355

- Lightning Arresters:
Brach Combination *160
Magnetic Blow-Out *60
Lightning Protection:
Experience on the Southern..... 305
Locating Automatic Signals..... 105
Location Plans, Making Small Scale.. *217
Long Island:
Construction.....129, 222, 347
Electrification of Evergreen Branch 133
Los Angeles & Salt Lake:
Construction31, 223
New Automatic Signals.....*367
Louisiana Railway & Navigation:
Construction News 31
Louisiana Western:
Construction News 222
Louisville & Nashville:
American Flag Erected at Howell 133
Construction98, 161, 223, 281, 315, 347, 382
Hold-Main Signals*108
New Single-Track Automatics.....*19
Personal161, 250
Low-Voltage Switch Mechanisms:
Requisites for Operation..... 197
Lundy, B. A.:
Electric Interlocking at Utica, N. Y.*79
- M**
- MacDonald, A. C.:
Warming Up a Motor Car..... 6
Mackenzie, L. B.:
Welding in the Signal Department 124
Magnetic Blow-Out Arresters.....*60
Magnet, Use in Signaling..... 115
Maintainers:
Who Should Furnish Tools..... 4
Maintaining Line Circuit to Standard*233,*255
Maintainin' Work in Winter..... 48
Maintenance:
Announcement of New Series..... *65
Automatic Block Signals..... 338
Batteries*145
Care of Oil and Electric Signal Lamps 306
Cost of Automatic Signals in England 178
Handling Material for..... 274
In Winter*1, *5, 46, 60
Maintaining Line Circuits to Standard*233
Mechanical Interlocking*370
Of Relays 174
Organization for 73
Preparation for Winter.....*325
Study of Labor Problems.....*102
Track Circuits 211
Unit for Determining Standard Sections 199
Marking Tools 114
Massey Company, C. F.:
Signal Supply 63
Material:
Stories of*255
Maxohm Adjustable Resistance Units 187
McGregor, Charles:
New York Elevated Signal Improvements*289
Mechanical Interlocking:
Inspection Report 22
Maintenance*370
Mechanical Locking, Cleaning..... 58
Meeting the Problems of Winter..... *1
Melting Snow with a Kerosene Torch. *47
Michigan Railway:
Construction 382
Mileage and Details of Signals in Use *206
Military Service (See Roll of Honor).
Miller, F. B.:
Kinks Which the B., R. & P. Uses with Success*122
Miller, Train Control Corporation:
Signal Supply 350
Missouri, Kansas & Texas:
Construction61, 190, 222, 223, 283, 347, 382
Personal191, 382
Standard Concrete Towers.....*239
Use of Printing Telegraph..... 222
Missouri Pacific:
Construction.....61, 161, 315
Mock, H. F.:
Preparing for the Winter..... 46
Prize Contest Paper on Signal Appliance Exhibit 168
Montreal & Southern Counties:
Signaling on Victoria Jubilee Bridge*55
Motor Cars:
Converted Hand Car.....*30
Experiences in Operation..... 139
Fire Protection 344
Operating as Extra Trains..... 26
Operating with Safety.....*111
Operation in Winter..... 6
Priming an Engine..... 58
Repairing Broken Gasoline Pipe.. *69
Rules in Use on the Southern..... 166
Safe Operation.....*33, 195, 255
Work Train Orders..... 228
Motor, Signal:
Maintenance 338
Mounting for Crossing Signal in Center of Street.....*158
Moving Signals Bodily..... 246
Mudge & Company:
Signal Supply*252
Mullins, W. J.:
New Automatic Signals on the C. G. W.*118
Munthe, Alf:
Signal Department Plans..... 360
- N**
- Nashville, Chattanooga & St. Louis:
Personal Mention.....161, 224, 283
Telephone Train Dispatching.... 222
National Carbon Company, Inc.:
Signal Supply News..... 191
National Association of Railway Commissioners:
Committee Report on Grade Crossing Safety 364
National Electrical Safety Code:
Discussion by Telegraph Superintendents 154
National Electric Specialty Company:
Magnetic Blow-Out Arresters.....*60
Signal Supply 316
National Railway Appliances Association:
Chicago Exhibit*101
Coliseum Floor Plan.....*78
Contest on Exhibit.....*34, *66, *131
Improving the Exhibit.....*163, *167
March Exhibit*286
Membership List (1917)..... 45
Membership List (1918)..... 360
National Safety Council:
Adoption of Universal Danger Symbol 31
New Books:
Examples in Battery Engineering. 227
Proceedings of the Railway Signal Association 133
Railway Signal and Permanent Way Engineer's Pocket Book. 194
New Orleans & Northeastern:
Personal Mention 62
New South Wales Government Railways:
Signaling Apparatus in Use on.... 8
New York Central:
Compulsory Pension Suspended... 301
Construction.....61, 97, 222, 315
Electric Interlocking at Utica, N. Y.*79
Employment of Feminine Workers Personal161, 348, 383
Telegraph School 315
New York Central, Lines East:
Personal 383
New York Central, Lines West:
Construction.....222, 282, 347, 348
Personal 349
New York, Chicago & St. Louis:
Personal News223, 382
New York Municipal:
Construction News 31
New York, New Haven & Hartford:
Construction News31, 97
Flag Unveiling at Tower 12..... 161
New Daylight Semaphore Lanterns*187
Personal Mention 99
Signal Foremen's Outing..... 250
Tests on Webb Automatic Stop... *151
Use of Motor Cars 140
New York, Philadelphia & Norfolk:
Construction 129
Personal Mention31, 382
New York State Public Service Commission:
Orders Gates Closed at Night.... *55
Night Towerman*381
Non-Automatic Signals Completed, Under Way, and Contemplated January 1, 1917..... 9
Norfolk & Western:
Accident Record 281
A. C. Signals*185
Construction News31, 61, 282, 382
Personal283, 348
Northern Pacific:
Construction190, 282, 348
Personal32, 99, 191, 250
Speeding Up Freight Trains by Automatic Signals 210
- O**
- Ohmmeter, Use in Signaling..... 115
Oiler With One-Gallon Capacity..... *157
Okonite Company:
Signal Supply News..... 191
Operating Military Railways in France *351
Operator in Distress.....*354
Ordnance Corps, Need for Men.....*317
Oregon Short Line:
Construction31, 129
Personal62, 161, 283
Oregon-Washington R. R. & Navigation:
Remodeling an Electric Interlocking*241
Organization:
For Signal Maintenance..... 73
In the Signal Department.....*226, *276
Metaphor 354
Oscillograph, Application of..... *75
Outdoor Cable Terminal:
Standard Underground Cable Co. *380
"Out of Order" Signal.....*125
Outlook for Railway Meetings.....*131
Overlap:
Operating Men Discuss Use of... 362
With A. P. B. Signaling..... 108
- P**
- Pacific Electric:
Light Signal Performance Records. 245
Los Angeles Terminal Interlocking*142
Padlocks on Switch Boxes..... 84
Page Steel & Wire Company:
Signal Supply350, 383
Page Woven Wire Fence Company:
Signal Supply162, 350
Painting Mechanical Interlocking Parts 374
Parowax for Wire Joints..... 379
Partition in Trunking for Double Leads 378
Passing of 1916 *12
Passing the Buck.....*221
Peabody, J. A.:
Broken Rail Protection..... 25
Peddle, Charles R.:
Drafting Room Practice on I. R. T. 359
Pennsylvania Railroad:
Baseball Team on N. Y. Division. *315
Change in Signal Colors..... 250
Construction31, 61, 98, 190, 222, 282, 348, 382
Employment of Men Over 45..... 281
Failure Record of New York Division 4
Furloughs for Soldiers..... 249
Liberty Bonds for New York Division 382
Mt. Union Accident..... 120
Personal32, 62, 99, 223, 251, 283, *315
Safety Record 61
Pennsylvania, Lines West:
Construction62, 382
Personal 250
Pere Marquette:
Construction News 129
Periscope for Towermen.....*288
Permissive Signals:
Standard on the Southern..... 305
Philadelphia & Reading:
Construction223, 382
Flash Light Crossing Signals.....*346
Phinney, R. M.:
Make Drafting Room Notes More Comprehensive 359
New C. & N. W. Bascule Bridge Interlocking*301
New Interlocking Plant in Milwaukee*267
Photography in Signaling.....*299
Pilot Lamp in Signal Lighting Circuit. *231
Pipe Compensation*371
Pipe Coupling 379
Pipe Lines:
Protecting at Grade-Crossings.... *218
Use of Crude Oil..... 247
Pittsburgh & Lake Erie:
Construction31, 161, 223
Place to Stand 247
Point for Digging Bar.....*379
Polarity, Determining 115
Pole Line Maintenance..... 233
Poles Purchased in 1915..... 121
Porcelain Battery Jars, Difficulties With 288
Porter, L. B.:
Light Signals on the C. M. & St. P.*256
Portland Cement Association:
Signal Supply News..... 64
Portland, Ore., Use of Railway Signals *95
Position-Light Signals:
Address Before Association of Railway Electrical Engineers. 31
Paper Before Illuminating Engineering Society 96
Postal Rates on Technical Journals.. *134
Power Plants for Hand Cars.....*30
Preparation for Winter Maintenance.*325
Preparing for the Winter..... 46
Price of Signal Materials:
Increase in 1916..... *12
Primary Battery:
Renewing Crystallized Cells..... 377
Voltage Drop in Cold Weather.... 5
Priming a Motor Car Engine..... 58
Principles of Electric Locking.....*33, *49
Priority for Some Signaling.....*218

Protecting Slot Wires on Style "B" Mechanism	*29
Protection for Bond Wires	158
Protector Cap for Semaphore Shafts	*379
Public Service Commission of Pennsylvania:	
Grade Crossings Protection	222

Q

Queen & Crescent:	
Construction News	31
Q. & C. Company:	
Signal Supply News	130

R

Rail Clamp for Track Circuit Readings	*158
Railroads' War Board:	
Accomplishing Big Results	†225
Merging Eastern Roads	†252
Railway Construction in 1916	†2
Railway Educational Bureau:	
Signal Supply News	162
Railway Electric Switch & Supply Company:	
Signal Supply News	192
Railway Regiments for Service in France	209
Railway Signal and Permanent Way Engineer's Pocket Book, Book Review	194
Railway Signal Association:	
Advantages of Standard Hydrometer	134
Annual Convention:	
Announcement	196
Attendance	†253
Entertainment	†225
Program	266
Report	*292
Successful Meeting	†285
Committee Assignments for 1918	335
Committee Reports:	
D. C. Automatic Block Signaling	198
D. C. Relays	198, 296
Electrical Testing	297
Electric Ry. and A. C. Signaling	198, 297
Harmonizing of Specifications	196, 292
Lightning Protection	297
Maintenance and Operation	295
Mechanical Interlocking	196, 294
Power Interlocking	197, 295
Signaling Practice	196, 294
Signaling Requirements of Electric Railways	199
Standard Designs	198, 295
Storage Battery and Charging Equipment	298
Conventions in War Time	†194
Does Committee VII Receive Proper Support	353
Important Message from President	227
June Stated Meeting:	
Announcement	103, 138, 165
Report	196
March Stated Meeting:	
Announcement	85
Report	103
Meetings of Committee I	61, 129, 161, 347
Proceedings for 1916	133
Prospect for Meetings During the War	†131
Regional Committee Meetings:	
Day Versus Night	†3
Houston, Texas	382
Kansas City	31, 84, 103, 190, 274, 281, 288, 347
Ogden	84, 103
San Francisco	244
Texas	*315, 358
Results of Letter Ballot	35
Standard Drilling for Switch Points	†193
Use of the Word "Safe"	†286
War Time Work	†254
Railway Tobacco Fund:	
Signal Supply	383
Rate Advance Denied	221
Receptacles for Relays	177
Record for Train Operation	134
Records of Battery Renewals	*345
Reducing Electrical Shocks	27
Reflector Board for Indicators	*28
Reflectors for Signal Lamps	*187
Relays:	
Adjustment and Maintenance	174
Eliminating Residual Magnetism	†253
High Resistance Control Inadvisable	*319
High vs. Low Resistance	353
Importance in Signal Installations	†163
New Union Type DNL	†127
Two-Ohm on Dirty Track	†285
Remodeling an Electric Interlocking	*241
Renewing Batteries With Substitute Set	*123

Report Forms for Interlocking Inspection	22
Residual Magnetism, Eliminating	246, †253, *354
Resistance Units:	
Everett Multiple-Coil	*189
For Maintainers	*344
Maxohm, Adjustable	*160, 187
Rice, A. H.:	
More Supervision in the Signal Department	278
Richmond Terminal:	
Construction News	282
Robinson, J. P.:	
Light Signals on the Southern Pacific	*355
Roll of Honor for Signalmen	†193, 244, 278, 311, 346
Route Locking:	
Simple Circuit	†102, *120
Rubber Insulation:	
Source and Manufacture of	*263
Rudd, A. H.:	
Address on Position Light Signals	31
Early Electro-Mechanical Interlocking	35, 228
Signals or Signs for Highway Crossings	165
Rule G, Argument for	243
Rules for Safe Motor Car Operation	195
Russell, E. L.:	
Rock Island Signaling on the Chicago Terminal	*67

S

St. Louis-San Francisco:	
American Flag on Each Locomotive	161
Construction	97, 161
Safe:	
Use of the Word by R. S. A.	†286
Safety Appliance Bill in Congress	281
Safety at Highway Grade Crossings	364
Safety in Operating Motor Cars	*111
Safety in Train Operation:	
Pennsylvania's Record	61
Safety Record on I. C. and C. B. & Q.	129
San Antonio Belt & Terminal:	
Construction News	222
San Francisco-Oakland Terminal:	
Experience With Automatic Stops	†286
Sangamo Electric Company:	
Ampere-Hour Meter for Signal Service	*125
Signal Supply	224
Scale on a Triangle	*378
Schenectady Railway:	
Construction News	97
Schlesinger, A.:	
A. C. Signals Extended on Electric Line	*320
Scraper for Cleaning Mechanical Parts	*373
Screw Driver Made of Hard Wood	186
Screw Extractor Set, Easy-Out	*60
Seaboard Air Line:	
Construction	61, 281
Sectional Route Locking	*49
Sectionalizing Switch:	
Application on the Southern	*303
Selective Draft:	
Effect on Signal Department Employees	†225
Semaphore Blade Level	*28
Semaphore Shafts:	
Protector Cap for	*379
Semaphore Signals for Crossing Protection	†132, *153
Separators for Storage Cells	247
Shafts and Bearings, Protecting	187
Shaver, A. G.:	
High Resistance Control Relays Inadvisable	*319
The Signal Engineer	*276
Sheffield Power Top Applied to Old Hand Cars	*30
Shooting Insulators to Save Wire Line	*229
Shriver, E. F.:	
Work Train Orders for Motor Cars	228
Signal Accessories Company:	
Signal Supply News	99
Signal Appliance Association:	
Annual Meeting	*275
Signal Blades, Wire Hooks to Hold	217
Signal Cases, Keeping Dampness Out	29
Signal Department Organization	276
Signal Department Roll of Honor	†193, 244, 278, 311, 346, 360
Signal Engineer, Position of in Railway Organization	†254, *276
Signal Failure Report	*103
Signal Lamps:	
Cost of Lighting	245
Development in Construction	84
Dimensioning Drawings	*166
New Daylight Type	*187
Signal Protection for Washouts	*245
Signals or Signs for Highway Crossings, Correction	216
Signalmen:	
Participation in the War	†132
Setting a Safe Example	†33

Signalmen's Benefit Association	184
Signals:	
Installed After Accidents No Proof of Negligence	48
Operation in Case of Broken Rails Or Signs for Highway Crossings	165, 195
Protect Fire Apparatus in City Streets	*95
Solve Transportation Problem	3
Significance of the Strike Settlement	†101
Signs or Signals for Highway Crossings	†164, 165
Sixty-Day Portable Signal Battery	249
Sleeve Connectors	*236
Snow:	
Handling on a Busy Terminal Division	46
Removal in Interlocking Plants	5
Solder Tray	*59
Soldering Stand	*247
Southeastern & Chatham (England) Construction	347
Southern Railway:	
Demonstration of Signal Protection for Washouts	*245
Experience with A. C. Signaling	*302
Highway Crossing Protection	129
Motor Car Rules	166
Personal	32, 99, 250, 283
Southern, Lines West:	
Personal	62, 191, 223
Southern Pacific:	
Construction	97, 347
Medals for Safety Work	156
New Installation of Light Signals	*355
Personal	161
Speaking Tube for Interlocking Towers	28
Sperry, Henry M.:	
Why Should a Railway Install Signals?	333
Spokane, Portland & Seattle:	
Construction News	97
Staff Station Without Attendants	*305
Standard Asphalt & Refining Company:	
Signal Supply	316
Standard Battery Charging Set	*30
Standard Drilling for Switch Points	†193
Standardization, Promotion of	†101, 104
Standard Underground Cable Company:	
New Outdoor Cable Terminal	*380
Signal Supply News	99
State Public Utilities Commission of Illinois:	
Orders Standard Grade Crossing Protection	61
Overhead Electrical Construction Standards	97
Stecher, C. G.:	
The Use of Photography in Signaling	*299
Steel, Hardening	114
Stiles Company, T. George:	
Signal Supply News	63, 64
Storage Battery:	
Application and Maintenance	*148
Equalizing Specific Gravity in New Cells	314
New Portable 60-Day	280
Operation on the Ampere-Hour Basis	*125
Use of R. S. A. Hydrometer for Each Housing	134
Stradling, E. G.:	
Block Signals on the Monon	*105
Study the Advantages of Signaling	†352
Submarine Lines:	
Maintenance	235
Sub-Station Equipment on C. M. & St. P. A. C. Signals	*257
Substitute Battery Set	*123
Suggestion Boxes, Why Not Use?	134
Suggestions for Snow Handling	60
Suggestions on Drafting Room Practice	359
Summary of Signaling in 1916	†2, 9
Sunset Central Lines:	
Construction News	31
Supervision in the Signal Department	278
Switches and Derails:	
Maintenance	342
Switch Adjustment:	
Covers	*6
Housed	*280
Switchboard:	
Equipment in Denver Terminal	*91
Panel Supports	*183
Switch Box:	
Adjustment of Contacts	244
Entrance	*219
Protecting Connections	27
Switch Indicators:	
Location of	108
Switch Lights, Special	35
Switch Points:	
Drilling	*27, †193
Sykes, W. R.:	
Connection with Controlled Manual	†351
In Memory of	*376
Symes, C. D.:	

T

Tag Holder for Storage Bins.....	*247
Tales of the Road by an Ex-Signal Inspector:	
Meetings	21
Tamping Bars	*274
Taps on Electric Conductors.....	237
Telegraph Schools on the New York Central	315
Telephone Dispatching:	
Improved Conditions by Use of High Resistance Receivers.....	156
Telephone to Blow Auto Horn.....	366
Templeton, Kenly & Co.:	
Signal Supply News.....	224
Temiskaming & Northern Ontario:	
Construction News	222
Terminal:	
For Battery Elevator.....	345
For Common Wires.....	*59
Houses	*202
Terminal Box:	
Keeping Mice Out.....	*379
Terre Haute, Indianapolis & Eastern:	
A. C. Signaling.....	*330
Test Box	*123
Test Set	*58
Testing Electric Circuits.....	*116
Texas & New Orleans:	
Construction	281, 347
Thomas, G. K.:	
Dallas Union Terminal Interlocking	*37
Thompson-Levering Company:	
Signal Supply News.....	64
Tieing Line Wires.....	*233
Tightening Loose Cranks.....	*59
Tin Tubes for Carrying Liquids.....	218
Tobacco Fund for Railway Regiments	*317, 346
Toledo & Ohio Central:	
Combination Concrete Foundation and Battery Case.....	*246
Tonnage Signal:	
Special A. P. B. Circuit.....	*369
Tools:	
For Maintainers	*113
Furnishing Maintainer's	4
Tornado Damages Interlocking Plants	170
Towers:	
Design	*226
Fast Time in Building on I. R. T.	250
Tracing on Blueprints.....	344
Track Circuits:	
Bending Bolts in Insulated Joints.....	*285
Dirty Track and the Two-Ohm Relay	*285
Maintenance	211
Resistances for Most Adverse Conditions	198
Tests of Resistance on Typical Sections	200
Track Drill Attachment.....	*273
Track Instruments:	
Sykes' "Last Wheel"	*363
Train Accidents (See Accidents)	
Train Control Appliance Company:	
Signal Supply News.....	64, 191
Train Operation:	
In India	215
Record	134, 189

Train Orders:	
Eliminating Form 31.....	*352
Train Order Signals:	
Improving the View.....	*186
New Use For.....	*376
Train Starting System in Dallas Union Terminal	*40
Trunking:	
Entrance in Signal Foundation....	*107
Installation of	*41
Maintenance	234
Partition in	378
Tub Warmers to Keep Batteries from Freezing	218

U

Union Pacific:	
Construction News	129, 282, 382
Personal	224, 284, *315
Union Switch & Signal Company:	
DNL Relay	*127
Liberty Loan Bonds.....	382
Signal Supply.....	32, 63, 100, 224
Three-Aspect Automatic Flagman	*29
Unit Prices for Valuations.....	44
United Railway & Electric Company:	
Construction	98, 190, 250
U. S. Civil Service Commission:	
Examination for Senior Signal Engineer, Grade 2.....	315
United States Graphite Company:	
Signal Supply News.....	162, 252
U. S. Light & Heat Corporation:	
Signal Supply News.....	32, 99, 100
Universal Concrete Products Company:	
Centrifugal Concrete Poles.....	155
Universal Volt-Ammeter Attachment.....	*217
Use of Electric Fouling Bars in England	*362

V

Valuation, Federal:	
Progress in Signaling Department	43
Tentative Figures Do Not Represent Value	*65
Van Billiard, R.:	
Experiences of a Future Signal Engineer	*329
Vandalla:	
Construction News	61
Virginian:	
Personal	97, 283
Volt-Ammeter Attachment	*217
Voltmeter, Use in Signaling.....	115

W

Wabash:	
Construction News...31, 61, 97, 283, 382	
Wage Increases on Chicago & North Western	129
Wages Fixed by Government.....	*101
Ward-Leonard Electric Company:	
Signal Supply	349

War Preparations of the Railways....	141
War's Effect on the Signal Department	*132
War Time Work of the R. S. A.....	*254
Washington, Baltimore & Annapolis:	
Construction	281, 347
Waste, Eliminating	288
Waterbury Battery Company:	
Signal Supply News.....	130
Ways to Win in the Battle with Winter	*5
Webb Automatic Stop:	
Tests on the New Haven.....	*151
Weighing the Mail.....	222
Welding in the Signal Department....	124
Western Electric Company:	
Signal Supply News.....	32
Western Maryland:	
Operating Motor Cars as Extra Trains	36
Personal	316
Signalman's Motor Car Operated as Extra Train.....	*111
Westinghouse Air Brake Company:	
Signal Supply	32
Westinghouse Electric & Mfg. Co.:	
Signal Supply	100, 252
Wheatstone Bridge:	
Home Made	*122
Use in Signaling.....	115
Whitehorn, A. R.:	
Operation of Motor Cars.....	112
Prize Contest Paper on Signal Appliance Exhibit	169
Wigwag Signals on an Electric Line:	
Chicago Railway Signal & Supply Co.	*380
Winter Maintenance	*1, *5, 46, 60
Wire:	
Connections to Rail.....	198
Holder for Cotter Pins.....	*247
Hook to Hold Signal Blades.....	217
Joints	*255
Wire Line:	
Shooting Insulators in Flooded Districts	*229
Wire Line Carrier for Kenley Tops..	377
Wire Line Crossings:	
Discussion by Telegraph Superintendents	154
Wiring:	
In Instrument Cases.....	*260
Style B Mechanism.....	*29
Women in Signal Drafting Rooms....	*193
Wood, R. R.:	
Concrete Towers on the M. K. & T.	*239
Wooding Automatic Stop.....	*311
Work Train Orders for Motor Cars...	228

Y

Yazoo & Mississippi Valley:	
Construction News	281

Z

Zelnicker Supply Co., The Walter A.:	
Signal Supply	252

PERSONAL MENTION

[Photographs are indicated thus*. Obituaries are indicated thus†]

A			
Acker, C. M.	284	Case, George B.	278
Ackerman, A. H.	100	Cash, E. B.	162
Adams, W. M.	223	Cassidy, E. T.	99
Africa, H. L.	244	Cassidy, W. G.	99
Akers, W. E.	284	Castelloe, Jack	346
Allen, E. A.	250, 349	Champion, M.	278
Allen, John	99	Channell, C. E.	284
Althouse, I. C.	244	Charleston, R. M.	63, 99
Amman, C. W.	279	Childs, W. L.	250
Anderson, Elmer T.	360	Clappison, H. M.	130
Anderson, G. R.	244	Clark, H. P.	162
Anderson, J. H.	283	Clark, J. M.	279
Andrews, G. E.	279	Clark, R.	383
Andrews, E. L.	62	Claunch, E. D.	316
Andrews, J. A.	99	Clavier, W. F.	244
Anthony, C.	251	Clayton, D. W.	99, 250
Applegate, Francis M.	346	Clinckner, W. H.	244
Argyle, Alfred	278	Cloud, A. D.	224
Arrendiell, A. T.	31	Cloutier, Edward W.	279
Arterburn, A. C.	99	Cobb, George	284
Ashbridge, Howard	346	Cobb, Samuel J.	244
Atkinson, F. M.	279	Colbert, E.	62
B		Cole, E. M.	250
Baggerman, G. L.	161	Cole, George E.	130
Bailey, T. W.	62	Cole, Theo. H.	278
Bailey, R. W.	279	Cole, W. W.	191, 223
Baird, Milton A.	162	Coleman, W. W.	63, 224
Baker, G. E.	278	Colvin, C. E.	191
Baldwin, R. F.	283	Conklin, L. G.	284
Banks, Leonard	279	Conner, J. L.	162
Barany, Edmund	349	Connolly, Joseph P.	279
Barr, M. A.	244	Conover, A. A.	360
Barry, John G.	192	Constable, F. W.	348
Bartlett, G. M.	62	Cook, W. F.	284
Baulu, Leonard	278	Cooper, B. W.	316
Baumann, E. G.	63, 251	Cooper, Clive	191
Beauch, P. C.	283	Cooper, G. A.	162, 252
Beckhussen, E. M.	32	Cooper, S. F.	191
Bee, W. G.	†252	Courter, A. F.	99
Beebe, James A.	279	Cowles, S. J.	223
Behnke, C. B.	62	Cox, John E.	244
Bell, W. I.	62	Cox, R. J.	191
Belvin, M. T.	279	Craft, J. W.	244
Benfer, R. S.	283	Crane, C. V.	279
Bentley, R. S.	278	Crantford, Earl W.	346
Bigler, Jr., H. F.	162	Crawford, D. K.	223
Bikle, P. F.	63, 251	Creamer, T. O.	383
Bill, Jr., Conrad	99	Creighton, L. E.	383
Billig, Frank A.	279	Criqui, W. V.	99, 244
Bingham, J. W.	279, 283	Cronk, J. S.	63
Black, E. A.	349	Crowe, Howard	279
Blackmore, G. A.	63	Cunningham, W. L.	283
Blair, William	31	Dahlstrom, H. R.	284, *315
Bodwell, P. G.	191	Dalton, Paul	278
Borland, J. E.	279	Davis, G. W.	191
Bouher, Ross	278	Davis, H. A.	244
Bowie, E. A.	32	Dawson, W. A.	349
Bowker, T. A.	244	Dayton, W. H.	252
Boyd, Forrest H.	278	Deardorff, C. M.	279, 360
Boyd, William F.	383	Decker, J. D.	244
Bradford, C. C.	100	Deeming, Herbert	252
Bradshaw, J. A.	346	D	
Bradley, E. E.	316	De Freitas, J. W.	32
Bramhall, A. L.	244	De Graves, Glenn F.	346
Brewer, N. E.	284	Delthloff, John	278
Bridge, A. H.	250	Deming, J. H.	191
Bridge, F.	162	Denney, C. E.	223, 382
Bridgman, John C.	†224	Des Autels, James	31
Briney, Mark R.	130	De Witt, R.	284
Brooks, D. W.	279	Dickinson, B. F.	62
Broome, S. P.	162	Dirschel, J. G.	99
Brown, A. E.	32, 251	Disney, L. J.	283
Brown, H. K.	244	Doane, E. B.	383
Brown, J. T.	99	Doran, Harry G.	224
Brown, N. R.	252	Doran, T. H.	244
Browne, R. J.	32	Dorr, S. H.	†383
Bryan, W. T.	62, 284	Dorsey, H.	283
Bulla, M. B.	64	Doty, William R.	278
Bunnell, Eugene	346	Downing, Glen	278
Bunnell, E. V.	279	Doxsee, C. F.	31
Burbank, L. H.	244	Doyle, John J.	278
Burchfield, J. C.	251	Dranschak, John	279
Burke, M. D.	349	Drudge, Omhar	279
Burnett, W. F.	191	Dugger, R. H.	191
Burns, W.	62	Dryden, H. M.	260
Burrows, G. T.	284	Dugger, R. H.	278, 283
Burrows, Robert	284	Dumschat, A.	63
Burton, R. B.	383	Duncan, B. K.	223
Butcher, S. D.	279	Dunlaevy, J.	283
C		Dunn, William	279
Cain, F. E.	279	E	
Callan, J. A.	99	Earhart, C. E.	*251
Cameron, Palmer A.	130, 278	Eckstrom, A.	284, 360
Campbell, H. S.	64	Ehrenreich, Henry	278
Capps, William P.	99, 283	Eichblatt, O. H.	316
Carlson, J. O.	130	Eisle, R.	191, 283
Carney, E.	99	Eley, G.	99
Carr, J. E.	360	Ellenberg, D. T.	63
Case, D. M.	62	Ellis, D.	346
		Ellis, Wm.	161
		Emmons, Charles L.	284
		England, William	98
		Enswiler, Henry	279
		Ernster, C. F.	99
		Ewing, R. H.	161
F		F	
		Farrell, A. J.	283
		Fehskens, Walter H.	311
		Ferguson, D. J.	32
		Fetherston, H. M.	279
		Fischer, T. W.	244
		Fisher, G. C.	279
		Fitzgerald, J. M.	316
		Fitzgerald, Lawrence H.	279
		Flaherty, C. S.	284
		Flath, Otto S.	316
		Flick, R. A.	99
		Follmer, H. P.	283, 315
		Forbes, George B.	279
		Foster, C. M.	99
		Fournier, R. J.	278
		Fowler, George S.	†383
		Fox, Amos	279
		Fox, M. J.	62
		Frank, S. D.	32, 63, 251
		Frantzen, O.	311
		Fraser, George W.	62
		Frechette, Arthur	279
		Fredericks, R.	383
		Fretterd, L. H.	63, 99
		Friedrich, H. G.	279
		Frisk, Nels	99
		Frost, L. V.	63
		Fuller, Delbert W.	315, 349
		Fyler, W. P.	278
G		G	
		Gallaher, J. M.	283
		Galloway, Grover O.	224, 244
		Garrabrandt, J. R.	283
		Garrett, M. K.	63
		Gaskins, W. L.	62
		Gault, P. M.	348, 349
		Gearhart, F. L.	244
		Gemmell, John S.	162
		Gibson, S. D.	383
		Gifford, H. E., Jr.	*100, *349
		Gilbert, A. M.	383
		Giles, William F.	348
		Gill, J. S.	283
		Gillingham, M. P.	284
		Gillingham, W. J.	252
		Gleason, F. B.	32
		Goeppert, G. E.	162, 224
		Goings, C. E.	*62
		Goodman, W. C.	99
		Gort, Chas. A.	63, 99
		Gould, C. A.	284
		Gould, John D.	224, 244
		Gowing, M. R.	279
		Graber, G. A.	316
		Graham, C. D.	284
		Graham, William B.	346
		Grant, C. J.	279
		Graves, D. R.	316
		Gray, W. C.	284
		Gregory, Allen	244
		Greifzu, W. C.	244, 279
		Grills, A. E.	382
		Grindell, A. C.	279
		Groce, George H.	32
		Grubbs, T. S.	63
		Gurney, F. W.	64
H		H	
		Hackney, Francis	32
		Hale, J. F.	191
		Hall, C. C.	244
		Hall, F. E.	224
		Hall, Frederick	279
		Hall, N. S.	224
		Hallen, Iver	283
		Hamblin, W. C.	99
		Hancock, H. P.	348
		Hansen, T. C.	283
		Hanson, Ed.	316
		Harmon, R. A.	32, 63
		Harper, E. A.	99
		Harrigan, E. J.	311
		Harrington, D. D.	278
		Harrington, F. C.	99
		Harrison, A. F.	279
		Harrison, A. W.	284
		Hartley, Jr., Lewis	32
		Hartman, John	278
		Hartman, W. N.	32
		Hastings, W. R.	98
		Hawkins, V.	99
		Hazlett, R. R.	244
		Healy, J. H.	191, 223
		Healy, W. A.	99

R	
Rafferty, Thomas	279
Ragan, J. G.	161
Raughley, R. F.	251
Ray, R.	99
Reed, Watemon	283
Reese, R. L.	284
Reld, R. W.	279
Reilly, A.	162
Reltschky, A.	99
Relfh, E. J.	32
Rice, C.	316
Rice, Fletcher C.	18
Rice, Henry	316
Richard, A. S.	62, 283
Richards, B. H.	161
Richards, Royal L.	346
Riley, H. D. W.	346
Rinker, E. C.	348
Robbins, E. C.	316
Robbins, F. E.	162
Roberts, G. W.	64
Robins, E. N.	279
Robinson, B. S.	244, 279
Robinson, J. A.	316
Robinson, R. B.	161
Rockwell, R. R.	283
Rodger, George	279
Roe, David	283
Roe, Homer C.	279
Rohan, George J.	279
Ross, George	279
Rossiter, Efford	250
Roush, J. E.	316
Rowan, C. A.	63
Rozenzweig, D. W.	316
Ruark, P.	161
Ruark, Vernon	161
Ruby, E. L.	192
Ruggles, O. B.	193, 223, 251

3

St. John, C. E.	346
Satterlee, Richard S.	130
Scheve, A. B.	382
Schmidt, F. H.	32
Schmidt, Herman	162
Scholes, R. H.	316
Schroeder, H.	279
Schroeder, L. M.	284
Schubert, J. H.	283
Scott, Harry	223
Scott, J. E.	346
Scruggs, Carter	279
Scully, H.	32
Seemuth, W. F.	283
Seery, W.	316
Seybolt, Harvey	278
Shaffer, R. C.	162
Shannon, F. V.	63
Shannon, R. D.	279
Sharpe, A.	62, 250
Shaver, A. G.	349
Shay, R. C.	162
Sheene, H. R.	316
Sheets, H. F.	278
Sheffield, Ed.	161, 316
Shegogne, W. E.	283
Sherard, S.	99
Shick, T. J.	278
Shipp, H. W.	251
Shoemaker, Charles A.	278
Showalter, F. A.	99
Siemon, T. W.	63
Simpson, Charles	360
Singer, S. M.	250
Sinclair, James P.	283
Smail, F. F.	63, 283
Smart, V. I.	181
Smith, A. R.	99
Smith, C. P.	162
Smith, Eric	193
Smith, F.	360
Smith, M.	191
Smith, M. A. F.	316
Smith, O. M.	383
Smith, R. H.	62
Snow, G. R.	99
Snyder, E. F.	278
Soper, E. L.	279
Spangler, W. N.	251
Spect, C. Q.	279
Sperry, Henry M.	*350
Spide, T. E.	162
Spoerl, Peter B.	278
Spray, L. E.	315
Sproule, T. L.	63, †223, †251
Stahl, T. E.	383
Stanton, H. L.	63
Staples, T. E.	99
Stephens, R. S.	283
Steingraber, G.	284
Stevanson, A. M.	244
Stipp, F. E.	278
Stoltz, Jacques	383
Stookey, C. A.	279
Stone, Richard A.	283
Storms, W. S.	191
Stout, W. E.	32
Stump, H. N.	63, 251

Sullivan, D. E.	99
Sullivan, D. J.	316
Sundheimer, I.	32
Sutton, James	279
Sutton, J. F.	251
Swanson, Carl	99
Swirz, A.	32
Symes, C. D.	311, 348

T

Tanton, Walter F.....	383
Taylor, C. A.....	32, 251
Taylor, C. R.....	383
Teel, O. F.....	63
Ten Eyck, Peter G.....	*349
Thomas, R. E.....	251
Thompson, Clarence L.....	31
Thompson, W. J. B.....	382
Thorn, C. C.....	32
Thorpe, Vaughn P.....	346
Thurston, R. P.....	†283
Tiffany, Jack.....	278
Tilgham, G. O.....	31, 244
Tillotson, Geo. E.....	162
Timberlake, E. D.....	279
Timmons, F. C.....	284
Titley, J. C.....	223
Tittler, J. J.....	244
Titus, E. M.....	244
Toft, Guy.....	62, 251
Tongue, W. B.....	349
Torney, J. D.....	316
Townsend, W. L.....	283
Tripp, L. H.....	278
Trumbull, Robert S.....	316
Tubbs, M. C.....	316
Turn, H. D.....	224
Turner, R. S.....	284
Tyler, Cyril.....	63

u

Underwood, O. C.....	99, 250
Uptegraft, W. D.....	63
Utall, F. W.....	63

V

Vandersluis, Capt. W. M.	193.	316
Vandever, J. E.		279
Van Gemert, Leonard		52
Vaughn, J. T.		252
Veal, N.		316
Videll, O.		162
Vieau, Joseph		278
Vogel, W. J.		182
Vorhees, E. M.		99
Vreeland, W. A.		63

W

Waechtler, W. G.....	349
Wagner, A.	99
Wagner, A. C.....	244
Wagner, W.	244

Wakefield, Lawrence	278
Walker, W. W.	31
Wallace, Paul	278
Waller, R. E.	191
Wallis, E. J.	32
Walsh, M. E.	63
Walsh, M. Eugene	261
Walsh, W. F.	261
Walters, L. C.	99
Waltman, E. E.	284
Ward, C. P.	278
Ward, L. F.	283
Ward, Seber	383
Warner, E. A.	279
Warner, H.	416
Watson, E. L.	62
Way, H. C.	260
Weatherby, E. P.	316
Weaver, Claude	278
Weaver, H. E.	99
Welch, Ernest	244
Wells, William	224, 244
West, L. S.	161
Wetterstein, C. H.	244
Whitaker, B. R.	99
White, Harvey	251, 383
White, J. H.	283
Whitehorn, A. R.	250, 348
Wickersham, F. G.	383
Wilkinson, J. W.	278
Wilkins, P. O.	33
Wilkinson, T. R.	311
Williams, A. F.	99
Williams, B. N.	191
Williams, G. W.	284
Williams, M. W.	244
Williams, P. P.	383
Willis, J. F.	283
Willis, W. H.	162
Willis, C. F.	99
Winemiller, Paul	283
Wise, L.	279
Wisely, J. E.	223
Wold, G. A.	99
Wolf, F. W.	316
Wolsiegel, A. S.	284
Wood, R. R.	191, 316
Wood, Walter S.	279
Woodward, George E.	278
Worthington, E. E.	316
Wright, P. V.	316
Wright, W. C.	283
Wynant, H. W.	62

Y

Yarrell, A. J.	278
Yeingst, Daniel J. P.	279
Yokom, W. R.	279
Young, A. R.	346
Young, W. C.	161

Z

Zane, W. F.....	62, 99
Zimmerman, Frank E.....	311